

# ONR Europe Reports

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The East German Research Landscape in Transition

Part A: Status and Transition

Hans Dolezalek

2 March 1993

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# **The East-German Research Landscape In Transition**

## **Part A: Status and Transition**

*by Hans Dolezaleck, who was the Liaison Scientist for Oceans and the Atmosphere at the Office of Naval Research European Office. He is currently a Scientific Officer in the Ocean Technology Division at the Office of Naval Research, Arlington, Virginia.*

**This is the first report in a series of three on the East-German Research Landscape In Transition:**

**Part A: Status and Transition (93-2-R)**

**Part B: Non-university Institutes (93-3-R)**

**Part C: Research at East-German Universities (93-4-R)**

**They are being published without the customary technical editing process usually applied to the publishing of ONR Europe Reports. This is necessitated by a desire to preserve the timeliness of the contents in this series.**

**ONR Europe wishes to thank Hans Dolezalek and his wife, Lotte Dolezalek, for the major commitment and dedication that they invested in this series of reports.**

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THE EAST-GERMAN "RESEARCH LANDSCAPE" IN TRANSITION

Information for Scientific Collaboration with East-Germany

Including Surveys on Structure of Research in the FRG

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with the assistance of many colleagues compiled by

Hans Dolezalek

and the essential collaboration in

travel, visits, collecting, writing, and pre-editing by

Lotte Dolezalek

PART A: STATUS AND TRANSITION (93-2-R)

PART B: NON-UNIVERSITY INSTITUTES (93-3-R)

PART C: RESEARCH AT EAST-GERMAN UNIVERSITIES (93-4-R)

Opinions and statements in this REPORT are the author's, they must not be interpreted as positions of the Office of Naval Research, Office of Naval Research European Office, or the United States Navy.

1992

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223/231 Old Marylebone Road  
London NW1 5TH  
UNITED KINGDOM

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PART A:

DESCRIPTION OF STATUS AND TRANSITION  
OF THE GERMAN RESEARCH STRUCTURE  
AND THE EAST-GERMAN "RESEARCH LANDSCAPE"

1990/1992

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with the following Main Chapters:

1. Preface
2. Executive Summary
3. Background and Transition
4. Agencies and Organizations
5. American/German Exchange and Collaboration
6. Discussion
7. Short List of Institutes
8. Appendices

A table of contents is to be found on the following three pages.

THE EAST-GERMAN "RESEARCH LANDSCAPE" IN TRANSITION  
Information for Scientific Collaboration with East-Germany  
Including Surveys on Structure of Research in the FRG

PART A: DESCRIPTION OF STATUS AND TRANSITION

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**MAIN CHAPTER 1**  
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**P R E F A C E**  
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contains chapters:

- 1.1. Introduction
- 1.2. Acknowledgements

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### 1.1. INTRODUCTION

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If we want to solve the scientific problems of our time, international collaboration is unavoidable. The Office of Naval Research with its branch offices in Europe and Asia is not alone in recognizing this truth; indeed, special agencies or organizations are being established. Thus, Germany established in April 1991 a "Coordination Center European Community" in Bonn and in Brussels\* which keeps close contacts with its sister organizations in the U.K. and France\*\*. The German Center lists as its main objectives:

1. Providing in a quick and efficient manner specific information on the possibilities of the Research-Promotion Programs of the European Community,
2. Responding in competent and expert ways to questions on research promotion by the European Community,
3. Establishing a contact facility in Brussels for the German scientific world, equipped as necessary for this task,
4. Providing a forum where German scientists can meet European colleagues and representatives of the cognizant organizations of the European Community in the course of preparing and performing of EC Research Programs, and
5. Helping to find suitable partners for contacts\*\*\*".

While this is restricted to inner-European contacts, it obviously reflects a more general need. If interpreted geographically in a different way, the above four tasks also circumscribe part of the program of, e.g., the European Office of the Office of Naval Research. Because of the German re-unification of 1990/1991, objectives similar to the above 1 and 5, applied to scientific relations between the U.S. and Germany, in particular East-Germany, became a challenge. This report tries to respond to it.

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- \*\*) U.K. Research Councils European Office; Club des Organismes de Recherche Associés (CLORA).
- \*\*\*) The Koordinierungsstelle is supported by German research organizations as listed in this REPORT under 4.2 and 5.



German research in the transition of the years 1990 to 1992 reflects a period of continuous change. The "research-landscape" as it is often referred to, is shifting; very much so in the five new länder\* and in East-Berlin. The organization of their institutions is undergoing many changes, ranging from repeated changes of their names to direct effects on personnel at all levels and in many cases their scientific programs.

This report aims to facilitate scientific cooperation by describing the direction basic research is taking in the new länder. Applied research and exploratory development are described less extensively, and advanced development is only hinted at. This report hopes to provide the necessary information to establish scientific contacts, exchanges, the coordination of selected objectives, and collaboration, potentially including joint field experiments; all considered and conducted to a mutual benefit.

Organizations, institutes, and individuals entering into negotiations with their counterparts in the five new länder and East-Berlin should be aware of some shortcomings. This is a region that has been under totalitarian regimes for almost 60 years. The physical condition of its cities and towns is generally bad, hotel accommodations are difficult, telephone connections hard to establish, the traffic slow because of decay and because of ongoing re-construction of roads and railbeds.

The entire infrastructure is struggling to meet the new demands and there is no doubt that the new länder will catch up quickly with the West. Most important, however, these shortcomings do not apply to all aspects of public life. Some domains are in much better shape than the rest. These are predominantly the sciences from mathematics to physics, chemistry, biology, medicine. This comes as a surprise to many because until then very little was known of them in the West. In the present report, we shall deal with these areas.

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\*) In the Federal Republic of Germany (FRG), the use of the term "land", plural "länder", for its subdivisions, is being strongly suggested instead of "state". This is done to avoid a confusion with the American term "state". The "land" is a smaller entity with a different kind of autonomy versus the Federal Government and different relations to its counties and towns. The 16 German länder (including the three city-districts of Berlin, Hamburg and Bremen) do have their own governments (in the city-districts called "Senat") and elected parliaments. The länder are cognizant for cultural and educational affairs — including universities. Research institutes are imbedded in several different organizational forms which often include the federal government.

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It is not possible to understand the research structure in the five new länder without a sufficient knowledge of the situation in (West-) Germany. Therefore, a large part of this REPORT is dedicated to a survey on the West-German structure. This survey may be supported by several older general descriptions in the English language, which are quoted below in chapter 3.3.

This REPORT consists of three parts:

Part A presents a general statement; its validity for the foreseeable future seems to be reasonably predictable.

Detailed descriptions of individual institutes organized outside of the universities are presented in part B. (In the former German Democratic Republic most research activities were removed from the universities and organized in separate institutes under the Academy of Science, as it was done in the other East-Bloc countries). This part also includes institutions which, being practically independent of the university administration, are nevertheless tied to a university in various ways.

Part C will deal with the research situation within the old or newly founded universities.

The information for this report has been collected in four ways:

- (1) through numerous personal discussions with ministries, agencies and organizations in Bonn, Köln (Cologne), München (Munich) and (West-)Berlin, followed up by correspondence and telephone calls;
- (2) through the evaluation of books, journals, newspapers and other written or printed material;
- (3) by a short visit in June and a four-week travel in October 1991 to all new länder, including numerous discussions and the collection of printed material; and
- (4) given written reports by American scientists on their own visits. This includes some provided by the American Embassy in Bonn and the European representative of the National Science Foundation in Paris.

The material collected in these ways has been used without critical comments. Personal opinions, when given, are recognizable as such. Under the present circumstances, completeness seemed to be a futile effort; later additions are under consideration.

Additional and more detailed information is available on demand. The authors have accumulated books, reports, and other informative material related to the institutes, agencies, and organizations in Germany. The chapters 6.6 and 6.7 give some recommendations and hints.

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Future information on individual institutes has been, is being or will eventually be published in the EUROPEAN SCIENCE NOTES INFORMATION BULLETIN, edited by the Office of Naval Research European Office, 223/231 Old Marylebone Road, London NW1 5TH, United Kingdom; Address from the U.S.: PSC 802 Box 39; FPO AE 09499-0700; Telephone: +44 (71) 409-4508; Autovon: 235-4508; Telefax: +44 (71) 724-7030; Telex: (this is a U.S. number) 7402119 onr uc; Telemail: Omnet: ONR.EUROPE; Internet: onreur-gw.navy.mil

The Library of Congress in Washington is preparing a possibility to collect information material on German research and to make it available to U.S. scientists looking for collaboration. Also, much information is already stored in various data banks. For both refer to chapter 4.7.

Main chapter 8 (appendix) gives more general information on Germany.

## 1.2. ACKNOWLEDGEMENTS

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Since this report reflects an effort to collect information from many sources, an attempt to quote them all would produce a list with hundreds of names, reflecting either written or printed material, provision of reports, booklets, etc., many personal meetings, letters and telephone discussions. Such a list would be counterproductive.

Instead, we want to mention a few persons who provided basic guidance and followed that up by repeated discussions with us. Ministerialdirektor Dr. W. Benz of the Wissenschaftsrat; the President of the Leopoldina Academy, Prof. B. Parthier; Reg. Rat H. Bardy of the BMFT; the Director of the High-Frequency Institute of DLR, Dr. W. Keydel; and several persons each in the headquarters of the Max-Planck Society, the Fraunhofer Society and the Deutsche Forschungsgemeinschaft frequently corrected our erroneous assumptions.

Herren Kurrek and Wagenknecht of the Senatsverwaltung für Wissenschafts und Forschung, Berlin; Dr. Rainer Ruge of the Ministerium für Wissenschaft und Forschung of the Land Brandenburg in Potsdam; Dr. Martin Dube of the Kultusministerium of the Land Mecklenburg-Vorpommern in Schwerin; Dr. Frank Schmidt of the Sächsisches Staatsministerium für Wissenschaft und Kunst in Dresden; Staatssekretär Prof. Dr. Hans-Albrecht Freye of the Ministerium für Wissenschaft und Forschung of the Land Sachsen-Anhalt in Magdeburg; and Dr. Klaus Bartholmé and Dr. Manfred Dietrich in the Ministerium für Wissenschaft und Kunst of the Land Thüringen, spent a considerable amount of effort to help plan and conduct our visits to them and to institutes in their länder, often following this up with additional information provided later.

With particular gratitude, we mention the attention and often time-consuming assistance given to us in Jena by Magnifizenz Schmutzer, the Rektor of the Friedrich-Schiller Universität, and Dr. Jürgen Hendrich there - and in Berlin by Dr. Helmut Rabenhorst of the KAI-AdW and KAI eV.

Dr. B. K. Glück in Frankfurt (Oder) and Dr. Gerhard Pelzl in Halle (Saale) dedicated many hours of their time to help us better understand the conditions of life and work in the former GDR; and so did Dr. Spänkuch and Dr. Foken of the traditional Meteorologisches Observatorium Potsdam, and Prof. Siegfried Marx of the Karl-Schwarzschild-Observatorium Tautenburg.

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MAIN CHAPTER 2

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EXECUTIVE SUMMARY

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## EXECUTIVE SUMMARY

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Progress in the hard sciences in Europe as identified with individual researchers as with institutes was generally familiar to American scientists and science administrators. This also applied more or less to the Former Soviet Union. Information stemmed either from publications and conferences, or, to a large degree, from the work of the European Representatives of the Research Offices of the U.S. Navy, Army, Air Force, and National Science Foundation. An understanding of the structure of research and the organization of scientific institutions in these countries was and is much less common.

With regard to the former German Democratic Republic, however, both scientific achievements and the structure of research remained a largely unknown territory. According to the opinion of colleagues living there, this was a consequence of several facts, among them the German "Gründlichkeit" with which the government in East-Berlin undercut contacts with the West by a set of stringent regulations. American scientists could travel relatively easily and visit colleagues in the GDR. However, after they returned, they seldom shared their newly obtained information with a wider circle. For Europeans such travel was more difficult, especially for West-Germans; and getting access to a research institution was often nearly impossible. Thus, as no news of scientific progress was available, it was often assumed that in the GDR there was no science worth noticing. This was further confirmed by the fact that industrial products coming from the GDR were often of low quality, that the infrastructure was known to be deficient, and that living conditions were bad. Therefore, the opinion prevailed that whatever scientific research there might be, it would be mediocre at best.

Both assumptions turn out to be wrong.

The facts were that GDR scientists allowed to travel to the West were not always the best experts in the field they were expected to represent. Hard currency was not available for page charges for contributions in prestigious Western journals. Correspondence was censored and often did not arrive at its destination. Close contacts with the West subjected the East-German colleagues to suspicion and pressure from the government. In the East-Block countries, however, it was well known that East-Germany had a large research community, and that research done there was often of a quality superior to that in their countries. To study at a East-German university was a highly cherished privilege. As to the scientists in the GDR, to be successful under the existing conditions demanded not only a strong scientific morale but also inventiveness to build their own instruments which could not be bought from the West. An insufficient knowledge of scientific progress in the West led to hypothesis developments on some barely known truths. Approaches to programming had to be found in spite of the shortcomings of the ROBOTRON computers.

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Systematic assessment of the true quality of research done in the former GDR hardly existed before 1990; but the very few scientists who escaped from the GDR to work in Western countries, turned out to be equal with their Western colleagues within a very short period. With the opening of the borders and the re-unification a concerted Western assessment was put into motion. Careful scientific evaluation by the West-German Science Council yielded excellent results in many cases. Visiting American scientists returned with the opinion that many of their colleagues were on equal footing with the West or, because of their special skills and a strong motivation, would probably catch up quickly once the restrictions would be removed.

The increasing diversification of science generates everywhere a strong momentum for international cooperation. This creates, at least for the research promoting agencies of all countries, a need for sufficient information not only of scientific achievements but also of the foreign organizations supporting science. Whenever possible, this should include knowledge on the interest and the potential for international cooperation existing in such organizations.

The German reunification offered a chance to learn about the research potential in the region of the former GDR. Since a scientific assessment and all reorganization of that potential was and is mainly undertaken by the existing West-German establishment, any meaningful study of the East-German situation had to include a sufficient knowledge of that establishment. Accordingly, the information represented in this report was collected by visits and by other correspondence with agencies and institutions in both West- and East-Germany.

In the presentation of the results of this investigation, an attempt is being made to provide sufficient information for building contacts between American and German scientists and scientific institutions either to exchange ideas or to test possibilities for scientific and experimental collaboration. Where providing such information would require too much space in this report indications are given where one can obtain more details.

It turns out that avenues for a strong increase of mutually beneficial cooperation are already existing at least in part (but sometimes not well known) or seem to be possible for a future lay-out.

The first Part (A) describes the status and transition as a whole. Part B will give descriptions of the individual institutes and provide information on location and contacts. Part C is intended to describe the research situation at the old and newly founded universities.

**MAIN CHAPTER 3**  
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**B A C K G R O U N D   A N D   T R A N S I T I O N**  
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contains:

- 3.1. Research in Germany
- 3.2. German Re-Unification and its Consequences for Research
- 3.3. English Language Descriptions on Research in the Federal  
Republic of Germany (before re-unification of 1990)



### 3.1: RESEARCH IN GERMANY

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It was Wilhelm von Humboldt (brother of Alexander) who defined the German university as the place where research and teaching were given equal standing. Roughly at the same time, between 1805 and 1809, Jefferson encouraged Joel Barlow to design a national university in America, offering both "research and instruction", combining the advancement of knowledge with the "dissemination of its rudiments"\*. Humboldt's, as Jefferson's concepts were based on the ideas of the Enlightenment and on their own ideas on personal freedom\*\*. To carry out independent research had already earlier been a requirement for the appointment as a professor at a German university, while research had also been going on exclusively in a small number of elite German Academies without any teaching requirement.

At the beginning of the 20th century, additional weight was given to the role of research with the founding of the "Kaiser-Wilhelm-Gesellschaft zur Förderung der Wissenschaften" (Emperor Wilhelm Society for the Promotion of Science) in 1911 with Adolf von Harnack as its first president. After 1945, the Society was continued as the "Max-Planck- Gesellschaft zur Förderung der Wissenschaften" (MPG). Here, research programs are carried out, paid for by the government with no teaching, although most of the senior scientists at the various institutes of the MPG also did and do some teaching at a nearby university. The position of a Director at a MPG Institute carries a high prestige; the specific domains of research work done depend (within a broad frame) strongly on his perceived interests, potentially changing when the Director changes.

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\*) from: "The State of Academic Science and Engineering", National Science Foundation 1989, p.29.

\*\*) These concepts are in contradiction to the policy of dictatorships: To educate young men in independent thinking (which is the basis and the medium of scientific research) did not necessarily sit well with an autocratic government. In our own century we observe how totalitarian governments (e.g., more or less all Warsaw Pact countries) destroyed the unity between teaching and research by taking most of the scientific research out of the universities into special institutes. Such institutes then employed individuals of a somewhat greater age who, after having finished university and obtained degrees (also supposedly being less radical than students often are perceived to be), found themselves under the institutionalized supervision of directors.

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The first World War and its ensuing economic crisis threatened to thwart the progress of science. Measures for its rescue resulted 1920 in the founding of the "Notgemeinschaft deutscher Wissenschaft" (translated by Cassell 1949 as "Emergency Society for German Sciences", with the addition: "A university association for the support of sciences in the general poverty after 1918"). It was later renamed as "Deutsche Forschungs-Gemeinschaft" (DFG). It is comparable to the U.S. National Science Foundation.

Both these measures, the founding of the Kaiser-Wilhelm Gesellschaft and that of the Notgemeinschaft, were important not only because they would be naturally inclined to look at scientific research as something separate from teaching, but also because they extended the area of action to the whole Deutsches Reich (German Empire\*). This addition of a nationwide research establishment was the beginning of a novel development because after the founding of the Reich in 1871, universities and essentially the core of all cultural activity had remained a prerogative of the länder (and still were in the Weimar Republic and now are in the FRG).

After World War II, the DFG and the MPG with its institutes were given new life. The MPG was not particularly interested in applied research and development but the necessities of industry and commerce required such activities, thus, the "Fraunhofer Gesellschaft zur Förderung der Angewandten Forschung" (FhG, Fraunhofer Society for Applied Research) was founded with institutes in all German länder. In the first decades following WW II, other networks of research institutes were founded or developed out of already existing individual institutes. The "Deutsche Versuchsanstalt für Luftfahrt" became, in steps, the "Deutsche Forschungsanstalt für Luft- und Raumfahrt (DLR)" with a number of individual institutes in various länder. The German Weather Service does research on meteorology and atmospheric sciences in its various "Meteorologische Observatorien". Certain institutions expanded their scientific domains and also acquired extensive facilities. This created a common problem for all of them, thus the "Arbeitsgemeinschaft für Großforschungs-Einrichtungen" (Working Group for Large Research Establishments or Working Group of Establishments for Large Research Tasks; both meanings are expressed in the German name) came into being\*\*. Defense Research is a special interest of the "Forschungs-Gesellschaft für Angewandte Naturwissenschaften" (FGAN, Research Society for Applied Natural Sciences) which has several institutes in various länder. This host of organizations

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 \*) The German word "Reich" is generally translated with "Empire". It should, however, be remembered that this does not necessarily mean that it was ruled by an Emperor. The official name of the Weimar Republic was "Deutsches Reich", sharing this name with the pre-1918 empire ruled by the emperor.

\*\* ) also translated as "National Research Laboratories"

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was, however, not sufficient, and the Federal Government together with governments of individual länder established a number (47 in the old Republic before re-unification) of institutes under the name "Institutes of the Blue List". Some ministries of the federal government and of länder governments maintain their own research institutes and laboratories.

Industries need their own research facilities, they first appeared in the 19th century and proliferated since. The well-known Batelle Institute has a branch institute in Frankfurt (Main) among others. There is also a large number of smaller private institutions, and there are research institutes of many organizations with their own missions.

Funding for these various research networks may come from a number of sources; e.g., the Federal Government, the governments of the länder, industry, and foundations (some of which were founded exclusively to support research such as the Stifterverband für die Deutsche Wissenschaft and the Volkswagenstiftung). On the Federal level we find several ministries supporting research, and also a highly placed organization, the Wissenschaftsrat (Science Council), advising the Federal and Länder Governments on scientific issues, programs and plans. Each of the länder has its own ministry of science, research, etc. Some of these are described below under 4.4. To provide a forum for discussion on topics of interest to all länder, the ministers of these ministries formed the "Kultusministerkonferenz" with an office in Bonn.

A short description of the structure and organization of scientific research in the (old, prior to October 1990) Federal Republic of Germany is given below in chapter 4. This structure and organization is now expanded to cover the five new länder as well. In chapters 4 and 5, publications by the agencies and organizations promoting research are listed. In principle, they are generally accessible. The more important ones provide detailed information, often giving each individual contract or grant with the name of the principal investigator, the title of the project, the money provided and the duration. Obviously, this is a welcome resource for any scientist looking for colleagues to exchange ideas or discuss possibilities of collaboration.

### 3.2. GERMAN RE-UNIFICATION

#### AND ITS CONSEQUENCES FOR RESEARCH

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For research emerging from the former GDR, the attachment of its territory to the Federal Republic of Germany meant drastic changes. The process can only be understood when seen in the greater political context:

The German "Unification" of 03 October 1990 was a political act expressed in the "Grundgesetz" (Basic Law, essentially the Constitution) of the Federal Republic of Germany. It expressly allows other states to "join". The first step in that direction was taken by the "Bezirke", districts of about county-size, into which the communist regime had divided the GDR (abolishing the traditional länder or states\*). After the "silent revolution" of 1989/1990, the traditional länder were re-established. Then, each of them declared that it wanted to join the Federal Republic. The Government of the Federal Republic accepted these declarations with the due date of 3 October 1990. From that point on, all laws of the Federal Republic, its institutions and agencies automatically applied to the five new länder, unless individually and expressly modified. At the same time, the old city of Berlin was re-established and released from the control of the Four Allied Powers (under which it was since 1945). It re-assumed the borders it had prior to 1945, swallowing East-Berlin which had acted as the capital of the GDR. (West-)Berlin institutions automatically expanded their responsibility over the whole new area.

As a result, the Federal Republic became financially responsible for the newcomers. It had to reach into its own pockets as the assets of the former East-Germany were by far too small to allow financing even the most urgent needs in that territory. With this extension, the power to give orders also expanded. There is a German slogan: "Wer zahlt, schafft an" or "He who pays, also calls the shots".

It became a fact of life for the research establishment of the former GDR. What it spelt out, will be reported in this document. While research in the new länder had to pass close scrutiny, nothing similar had ever been done with their Western counterparts. It had not been deemed necessary and would also financially have been hardly feasible. According to present plans, only one scientific field will undergo a similar investigation: environmental research institutes in all of Germany will be examined in the near future.

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\*) following the example of the French Revolution establishing the "départements" instead of larger "provinces" or "gouvernements".

As indicated above, the structure of West-German research has been extended to provide the skeleton for the re-formation of East-German research. Therefore, a description of East-German research must include information about the West-German structure. Fortunately, there is enough material available, both in German and in English. The authors of this document shall briefly describe and quote from it.

In this context, it is important to realize that the process of extension into the East was not a simplistic expansion. The Germans decided to refrain from simply carrying over their own system. Instead, they chose a more complicated way. They were taking advantage of the occasion to utilize what they had learnt from their own development after 1945, and to consider new concepts rising to the surface. They set out to build around the proven structures and administrative forms a new "research landscape", emphasizing continuing as well as newly perceived research needs for the present and the future. This was a difficult task and it was frankly admitted that errors have been made. Hardships were unavoidable and often hard to bear. For our present interest, we conclude from all this that the development is still in flux, worthwhile to observe.

There is one more point to be considered.

In the former East-Bloc institutes of scientific research were often overstaffed, a situation which also applied to the former GDR. Furthermore, some of the areas of research maintained by the former East-German academies turned out to be of less interest after reunification because these areas were already adequately covered by existing West-German institutes. As a consequence, thousands of scientists of the five new länder and East-Berlin have been laid off by 31 December 1991. However, this does not reflect on the scientific quality of their work; it is rather often a consequence of the fact that their special expertise was no longer required in the new structure. In October 1991, we encountered in their institutes a strong concern with the fate of these laid-off colleagues. There are being made many attempts to help them. Some are supported, at least for a while, with soft money; some others will be supported for at least 18, maybe 36 months by special funds set up by the Federal Government. Still, many are not adequately covered. These people are scared about their future. They had grown up with a false sense of security in a society where everyone could consider himself practically an employee of the government from the moment he entered school. For them it is hard to realize now that it had been exactly these unrealistic conditions which led to the ruin of their society. Such an analysis cannot be expected from the average citizen so shortly after the old system disappeared.

The interested reader may want to refer to a description of the history written by an active participant. Dr. Wilhelm Krull of the Wissenschaftsrat (Science Council) has written a paper with the title

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"What happened to East German Research?

Reflections on the Science Council's Attempt to Evaluate and  
Restructure Non-University Research Institutions in East Germany"

to be published together with other papers on the reunified Germany in  
WORLD AFFAIRS, volume 153, issue no.4, spring 1992.

3.3: ENGLISH-LANGUAGE DESCRIPTIONS ON RESEARCH  
IN THE FEDERAL REPUBLIC OF GERMANY  
(BEFORE THE RE-UNIFICATION OF 1990)  
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(1) von Massow, Valentin, 1986: "Organization and Promotion of Science in the Federal Republic of Germany". Second edition. Inter Nationes, Bonn. 1 129 p, 13 x 20 cm.

Main chapters:

Introduction (20 p)  
Scientific Institutions (24 p, six sections)  
Promotion of Research and Assistance for Young  
Scientists (23 p, six sections)  
International Co-Operation (29 p, two sections)

and an appendix with:

Institution of Higher Education in FRG (list and  
statistics)  
Main emphases in university research (special and  
priority programs)

Bibliography (3 p)

Register (2.2 p)

12 tables.

This book is a valuable source for quick information on the general organization and the overall outline of performance. On pages 89-91 it lists more than 25 "agreements" between the Federal Ministry of Research and Technology and various US agencies, from the years 1973 to 1983. Similar lists for agreements between Germany and other countries, especially many of the Third World, are also given. Short historical surveys are given for the basic research institutions (including the "societies") in Germany, and very general statistics provided. There does not seem to be any preference for individual domains of science, and the humanities are treated equally with the sciences.

(2) Meyer-Krahmer, Frieder, 1990: "Science and Technology in the Federal Republic of Germany". (12th volume in series "Longman Guide to World Science and Technology"). Longman Group UK Ltd, Harlow, Essex. X + 208 pp, 15 x 24 cm.

Main chapters:

Introduction (12 p)  
Science and technology in the economy (18 p)  
Structure of science and technology (58 p)  
Science and technology policy of the federal government -  
principles and objectives (8 p)  
Main areas of federal science & technology policy (25 p)

Industrial research network & technology transfer (13 p)  
International science and technology (7 p)  
Regional development and science and technology (14 p)  
Impact of science & technology on economic  
change (19 p)

and the following appendices:

Directory of selected establishments (15 p)  
Largest industrial companies performing R&D in  
FRG (3 p)  
References (4 p)  
List of abbreviations (2 p)  
Subject index (1.5 p).

This book puts much emphasis on industrial research and research for industry and the economy. Its information is more quantitative than that in the book by von Massow. However, it also contains chapters such as "Conclusions for an innovation-oriented regional policy" (p.152-154), again with much attention to industry. A rather comprehensive set of statistics is provided comparing the situation in Germany with that of other Western developed countries (p.27-29, 31).

(3) "FRG, A Directory for Teachers and Students"

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published by the Kultur-Referat of the German Embassy in Washington 1989, 31 pp. Addresses and brief descriptions of agencies and organizations in the USA and in Germany. It is available from the German Information Center, 950 Third Avenue, New York, NY 10002, Telephone: (212) 888-9840.

(4) "The German Connection,  
a compendium for Americans planning to study, train or work  
in the Federal Republic of Germany"

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by Rolf R. Mueller, University of Missouri, St. Louis, 1988, 170 pp.  
Contents: (I) General sources of information on Germany; (II)  
Alphabetical listing of organizations and institutions (147 pages,  
approximately 900 addresses, each with a short description); (III)  
Selected library of useful publications (11 pages, 86 entries).

(5) The Federal Ministries of Research and Technology, and of Education and Science, publish English-language surveys and statistics on science and research in Germany, see for this below under 4.2.3 and 4.2.4. In addition, many agencies and organizations mentioned in this REPORT also issue English-language booklets and books.



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(6) The Raabe Verlag, known for his "Vademecum" series on German and European (including Russian) scientific, research, and university matters, and other publications, is producing the most complete source of information on research in Germany, stored on a CD-ROM. It is planned to be issued in November 1992 and be updated in the future on a regular basis. It will require an IBM or compatible computer (application for McIntosh is under negotiation) with DOS 3 or higher, Windows 3.0 or higher, and at least 512 kB of free space (i.e. 640 kB total). The information is in German and, to a great part, in English. The cost for the basic first issue will be slightly more than \$1,000. For more information call:

Dr. Andrea Wolter  
Dr. Josef Raabe Verlag  
Rotebühl Straße 51A  
D/W-7000 Stuttgart 1  
Telephone: +49 (711) 629-000  
Telefax: +49 (711) 629-0010

MAIN CHAPTER 4  
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AGENCIES AND ORGANIZATIONS  
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contains:

- 4.1. Survey
- 4.2. Federal Agencies
  - 4.2.1. Wissenschaftsrat
  - 4.2.2. "KAI"
  - 4.2.3. Federal Ministry of Research and Technology
  - 4.2.4. Federal Ministry of Education and Science
  - 4.2.5. Federal Ministry of Defense
  - 4.2.6. Research Institutes in Federal Ministries
- 4.3. Common Agencies of the Länder
  - 4.3.1. Standing Conference of Science etc. Ministries
  - 4.3.2. Standing Conference of University Presidents
  - 4.3.3. Commission of Federal and Länder Governments
- 4.4. Länder Agencies
  - 4.4.1. Remark on Situation in the Old Länder
  - 4.4.2. Berlin
  - 4.4.3. Brandenburg
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  - 4.4.5. Sachsen
  - 4.4.6. Sachsen-Anhalt
  - 4.4.7. Thüringen
- 4.5. Organizations (i.e., legally private organizations)
  - 4.5.1. Introduction
  - 4.5.2. Organizations Maintaining or Representing Research Institutions
  - 4.5.3. Organizations Supporting Scientists and/or Projects
- 4.6. Annotated Statistics
  - 4.6.1. Situation in the former GDR
  - 4.6.2. Survey on Finances for R&D in the FRG
  - 4.6.3. Non-university government supported institutes in the five new länder and East-Berlin
  - 4.6.4. Other institutes in 5 new länder & East-Berlin
- 4.7. Collections of research done and in progress.
  - 4.7.1. Introduction
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  - 4.7.3. National Technical Information Center
  - 4.7.4. STN Columbus, Ohio
  - 4.7.5. STN Karlsruhe
  - 4.7.6. Technische Informations-Bibliothek Braunschweig

#### 4.1. SURVEY

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Some historical information, facilitating the understanding of the present situation, was given in Chapter 3 of this report.

The principle of unity of teaching and research is even today the foundation for scientific research in (West-)Germany. As indicated in Chapter 3, the necessities of our times have produced a variety of exceptions. Nevertheless, representatives of teaching and of research continue to agree on that principle. They will favor building a bridge between research and teaching whenever it is possible. For example, the advice given by the "Wissenschaftsrat" (Science Council) to federal and länder governments is on both teaching and research. Around this generally accepted basic principle, a network of research institutions and research-sponsoring agencies and organizations has been created.

Education, indeed many if not most cultural matters remains the responsibility of the länder as it has been since the founding of the modern German Empire in 1871. The Federal Government is careful not to violate this principle. Exceptions may not be impossible but seem to be rare; a watchful public would certainly react against them. Teaching has remained entirely the responsibility of the länder; money for research often comes from Federal finances. One reason is the obvious fact that the Federal Government is richer than any land government. Another reason may be seen in cultural differences from land to land having a stronger impact on education and teaching than on research. All this is not carried to the extreme: the existence of a Federal Ministry for "Bildung und Wissenschaft" seems to blur the distinction if we accept literally the official translation of its name as "for Education and Science". There are parallels to the situation in the U.S.: there, education is vested in the towns and counties or parishes but there is also a U.S. Department of "Health, Education and Welfare". The gap between the federal and the länder levels in Germany is bridged in three ways:

- (1) the ministries for education, science etc. in the länder have established a joint representation for the discussion of mutual interests among them and also with the federal government (see below, 4.3.1.);
- (2) there is a commission for education, science etc. in which both the länder and the federal governments are members (see below, 4.3.3.);
- (3) there are research institutes which are jointly financed by both the federal and one or more land governments, on a fixed-percentage basis (GFE and BLE, see below, next page).

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In the non-governmental realm, research is promoted by a variety of organizations. Some of these are legally private even if they receive all their funding (or most of it) from the governments, both federal and l nder. In addition, private or industrial funding sources exist, they vary widely.

Research institutions can be classified. For the purpose of this report, we consider the following groups as especially interesting:

Gro ForschungsEinrichtungen (GFE) = Large Research Facilities  
 Blaue-Liste Institute (BLE) = Institutes of the "Blue List"  
 Max-Planck-Gesellschaft (MPG) = Max-Planck Society  
 Fraunhofer Gesellschaft (FhG) = Fraunhofer Society  
 Forschungs-Gesellschaft f r Angewandte Naturwissenschaften  
 (FGAN) = Research Society for Applied Sciences  
 Ressort-Forschungs-Institute = Research Institutes under  
 individual ministries of the federal or l nder governments;  
 especially the Deutscher Wetterdienst (German Weather  
 Service) under the Federal Ministry for Transport.  
 Private or Industry Institutes  
 Research Institutes of the universities.

The main sources of research financing are:

Bundesministerium f r Forschung und Technologie (BMFT)  
 = Federal Ministry of Research and Technology (FMRT)  
 Land Ministries for science and research (have different names  
 in the various l nder)  
 Other Federal or L nder ministries  
 Deutsche Forschungs-Gemeinschaft (DFG) = German Research  
 Society, the German equivalent of the NSF  
 Volkswagen-Stiftung = Volkswagen Foundation  
 Stifterverband f r die Deutsche Wissenschaft = Donor  
 Association the German Science  
 Other foundations  
 Industry (more than half of research expenses are funded by  
 industry)  
 Other private sources  
 International sources, e.g., European Community, NATO, USA.

Some of the Foundations do not directly support research (for example, do not finance institutes) but support individual researchers.

Joint financing is frequent. For example, the Fraunhofer Institutes are expected to obtain more than half of their budget from non-government sources, e.g. industry or foreign contracts. Blue List Institutes (BLE) get half of their funds from the federal government, the other half from the land in which they are located. The "Large Research Facilities" (GFE) get 90% from the federal government and 10% from the respective land. In many if not most

cases, a project which is supported by the DFG will receive additional funding from other sources.

In this connection, a number of agencies providing different kinds of support should be mentioned:

The "Wissenschaftsrat" (Science Council) in Köln advises the federal and länder governments on matters of science and research, including universities and colleges.

The organization "KAI" in Berlin (which changed its affiliation on 1 January 1992 but not its name) implements or helps to implement the recommendations of the Wissenschaftsrat on reforming the former research institutes under the GDR Academy of Science.

The "Kultusminister-Konferenz" (KMK) maintains an office in Bonn, representing all the science etc. ministers of the 16 länder.

The "Rektoren-Konferenz" (HRK) has an office in Bonn, representing the "Rektoren" (roughly equivalent to: "Presidents") of all the universities in the Federal Republic.

The "Bund-Länder Kommission für Bildungsplanung" (BLK) is an organization with an office in Bonn in which the ministries for science and other cultural matters and their officials of the federal and the länder levels join to discuss, advise, and decide on topics of common interest.

More details on the institutes, financial resources and supporting agencies and organizations listed above will be provided below. Also, for the old Federal Republic, information is to be found in the two books reviewed in chapter 3.3, above. Addresses for many more institutions etc., are to be found in the book by Oeckl, reviewed below in chapter 8.1.

#### 4.2. FEDERAL AGENCIES

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In Chapter 4.2, federal German research agencies having an advisory, directing or supporting function, are listed together with those of their publications which are of interest to the present document. Special remarks refer to the role played by each in the transition of research in the five new länder and East-Berlin.

##### 4.2.1. WISSENSCHAFTSRAT (SCIENCE COUNCIL) AND IMPLEMENTATION OF ITS RECOMMENDATIONS

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The Wissenschaftsrat is a high level advising body formed in 1975 by an agreement between the federal and the länder governments to advise them and other bodies on matters of science. It is sometimes compared to the U.S. National Research Council. That comparison is misleading because the direct governmental action in scientific and education matters is so much stronger in Germany than in the U.S. (for example, nearly all German universities are state universities under a land government); therefore, the Wissenschaftsrat is asked for recommendations in many more cases than the National Research Council. Its name is often translated as "Science Council"; that is a correct translation but it can cause some confusion, especially in Germany because of the unique position of this body. For this reason, we prefer to use the German name in this document.

The Wissenschaftsrat is composed of a Scientific Commission and an Administrative Commission, each having 32 votes. Resolutions need a two-thirds majority of the plenary session. Of the 32 members of the Scientific Commission, the President of the Federal Republic appoints 24 senior scientists who are suggested in common by the main scientific organizations (DFG, MPG etc.), and 8 "persons of public life" suggested jointly by the federal and länder governments. The 32 votes of the Administrative Commission are composed by six official representatives of the federal government who together have 16 votes, plus 16 official representatives of the länder governments with one vote each. The carefully calculated balance of votes, the fact that recommending bodies must agree before they can nominate a person to the President, the two-thirds majority required, all this indicates a high degree of sophistication, hopefully producing results which are so good that they will be implemented although the Science Council has no legal power to enforce its recommendations. It has, however, a veto power in some carefully defined cases of government action. Its president is Prof. Dieter Simon, the President of the "Max-Planck Institut für Rechtsgeschichte" in Frankfurt (Main); he has just been re-appointed for another period of three years. Its Secretary-General is Ministerialdirektor Dr. iur. Winfried Benz. The official seat is Berlin. The office itself is in several buildings in Cologne, it has the following address:

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Wissenschaftsrat  
Marienburger Straße 8  
D/W-5000 Köln 51  
Telephone: +49 (0221) 3776-0  
Telefax: +49 (0221) 388-440.  
Telephone of Dr. Benz: +49 (0221) 3776-222  
his immediate office: +49 (0221) 3776-223

A move to Bonn is contemplated; when the Federal Government finally moves to the new German capital of Berlin, the science-related ministries will stay in Bonn.

The Wissenschaftsrat issues Recommendations. It has been a general experience that its recommendations are indeed implemented because the quality of the recommendations over more than 15 years created a high prestige for it (the evaluation of a proposal to found a new university is a typical activity). After the Reunification of Germany on 03 October 1990, the Wissenschaftsrat was given the task to evaluate the science situation in the former GDR. There were two areas of special urgency for this task:

The fate of the more than 25,000 scientists employed by the former Academy of Sciences (and two smaller academies) of the GDR had to be considered. This was one partial reason for a careful evaluation of the approximately 80 Institutes of the Academies; on the basis of these evaluations, the government had to decide about continued employment of the scientists. This action had been prepared in advance but actually began immediately after reunification, i.e., 03 October 1990. The deadline was 15 July 1991 and was met. As a general result, the scientists retained their employment until 31 December 1991. Many of those who could not be employed after 01 January 1992 will be supported by the Government of the Federal Republic with other means for a period of at least 18 months (some seem to think that this will be expanded to 36 months, i.e. to end of 1994).

Certain domains of university education needed to be changed almost immediately. These were, first, departments strongly influenced or, more accurately, governed by Marxist ideology such as jurisprudence, history, social sciences; and, second, engineering and business management because of the impending changes in industry and commerce. Next came medicine, to be evaluated in the fall of 1992. The situation of the natural sciences and the other humanities taught at the universities presented a less urgent task; it was agreed that a more local evaluation by the länder governments should proceed before the Wissenschaftsrat itself expresses its own opinion. This process was set to begin about end of March 1992. We intend to report on the later results in Part C of this REPORT.

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The evaluation of the former Institutes of the Academy of Sciences began with reports written by the Institutes to be evaluated. These were passed on to a panel of senior German scientists of the particular scientific domain, as well as scientists from other countries. Subsequently, these panels visited the institute in question and submitted their report to the Wissenschaftsrat. Finally, the institute in question itself got the report and was informed of the result of the evaluation.

It is important to realize that this evaluation did not simply represent a judgement on the quality and necessity of the work done at these institutes. Such a judgement might then be followed with a recommendation either to continue or to terminate the work. Instead of such a procedure, a much more difficult, but also more promising, way was chosen. The whole edifice of research - the Germans like to call it the "Research-Landscape" - was restructured. Individual tasks of individual institutes were extended, reduced or canceled, new ones proposed; often, departments of an institute were taken out and incorporated with another institute, new institutes were proposed.

Existing ties between institutes and universities were modified, mostly made stronger, and numerous new ties of this nature were established. Many of the institutes located near a university, were connected with it in a special way, similar to the relationship between the Johns Hopkins University and the related Applied Physics Laboratory. In particular, senior scientists of the Institute are often appointed to become also professors at the University. Vice versa, university students are being admitted to the Institute for part of their experimental work and education. Such ties are usually expressed by choosing a particular form of the name of the institute. While an institute within a university (i.e. being part of it, under its administration) will have the name "Institute for... of the ... University"; an institute of this type will be called "Institute for.....at the.....University". The new class name for this type of institutes is "An-Institut", translated as "At-Institute".

The recommendations of the Wissenschaftsrat often also included suggestions about a kind of contractual relationship between various institutes, called "Verbund". This is a term familiar to Germans, designating the connection between various carriers of urban traffic in the same town, each remaining independent but agreeing to some joint interaction with the others to benefit the consumer. These "Verbunds" can be of interest to the American colleague entering into a collaboration with an East-German institute because this arrangement may broaden the scope of joint efforts.

Obviously, a re-arrangement and new creation to be performed on such a scale was a historically unique event. It presented an extremely exciting but also very difficult task. The difficulty was increased by the urgency to arrive at immediate recommendations.



Most of the senior scientists evaluating the Institutes were above the risk of looking at their task from a competitive perspective. There certainly were some exceptions. In the judgment of the colleagues in the East, a few of the evaluating scientists did not quite escape that risk. Errors did occur; we did encounter one or two of them. On the other hand, colleagues in the East are apt to misunderstand some of the results because they may not yet be familiar with all the necessities and procedures in a free society.

REPORTS BY THE "WISSENSCHAFTSRAT" (Science Council)  
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(a) Routine Publications:

"Wissenschaftsrat, Empfehlungen und Stellungnahmen 1989" 323 p 16 x 24 cm. is an annual publication. It contains the recommendations and positions of the W. on a number of actual research and education problems, organizations, plans. The recommendations are made on various levels, from recommendations on the future enlargement or organization of the university setup, down to individual programs.

There are also publications dealing with individual areas, for example:

"Stellungnahmen zu medizinischen Forschungseinrichtungen außerhalb der Hochschulen" (Position statements on facilities for medical research outside of the universities and colleges), 144 p, 16 x 24 cm.

"Stellungnahmen zu den Wirtschaftsforschungsinstituten und zum Forschungsinstitut für Rationalisierung" (Position statements on research institutes for economics and on the research institute for rationalization) 113 p 16 x 24 cm.

(b) Results of the Specific Evaluation of Research in East-Germany:

Results of the Evaluation Activities directed at the Scientific Institutions in the Former German Democratic Republic after Re-Unification of 03 October 1990. The reports are generally called "Stellungnahme" (Position Paper) or "Empfehlungen" (Recommendations). We will describe these reports in some detail because they contain much scientific information which may be of interest to those wanting to establish ties with the institutes in East-Germany, and because, to our knowledge, there exist no other English descriptions. Not all of these reports are now reflected in actual installations of new research facilities and then present material of mostly historical value only. However, they give a rather good report on scientific ability existing in the last years of the former GDR; these abilities did not disappear and, in special cases, may still be of interest.

The following list gives a sample collection:

- (a) Stellungsnahmen zu den außeruniversitären Forschungseinrichtungen in den neuen Ländern und in Berlin - Allgemeiner Teil. (Position Paper on the non-university research institutions in the new länder and in Berlin - General Part); 39 double-spaced typewritten pages plus an appendix of 27 pages in small print. This volume discusses the philosophy, execution, and performance of the re-evaluation of research in the former GDR. It is the most quoted product of the Wissenschaftsrat related to the restructuring of East-German research. The appendix provides three surveys: (1) Survey on non-university research institutions and their future structure, classified according to rough scientific domains; (2) Survey on about the same institutions classified according to institute carriers or administrative schemes; (3) Survey on about the same institutions classified according to länder or location; (3) Survey on future non-university research promotion grouped in sections; always with indications of the number of employees etc..
- (b) Stellungnahme zu den Instituten des Forschungsbereichs Physik, zum Einstein-Laboratorium für Theoretische Physik und zum Zentrum für wissenschaftlichen Gerätebau der ehemaligen Akademie der Wissenschaften der DDR" (Position Paper on the Institutes within the Research Areas of Physics, on the Einstein Laboratory for Theoretical Physics, and on the Center for Construction of Scientific Instruments, of the former Academy of Sciences of the GDR); 241 double-spaced typewritten pages, in German.
- (c) "Stellungnahmen zu den außeruniversitären Forschungseinrichtungen der ehemaligen Akademie der Wissenschaften der DDR im Fachgebiet Chemie" (Position Papers on the Extra-University Research Institutions of the former Academy of Sciences of the GDR in the domain of Chemistry) 203 double-spaced typewritten pages, in German.
- (d) "Stellungnahme zu den außeruniversitären Forschungseinrichtungen in der ehemaligewn DDR im Bereich Geo- und Kosmos-Wissenschaften" (Position Paper on the Extra-University Research Institutions in the former GDR in the Domain of the Geo- and Cosmos-Sciences); 266 double-spaced typewritten pages, in German.
- (e) "Stellungnahme zu den außerunversitären Forschungseinrichtungen in der ehemaligen DDR im Bereich 'Biowissenschaften und Medizin'" (Position Paper on the Extra-University Research Institutions in the former GDR in the Domain 'Biological Sciences and Medicine'); 209 double-spaced typewritten pages, in German.

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(f) "Empfehlungen zu den Ingenieurwissenschaften an den Universitäten und Technischen Hochschulen der neuen Länder" (Recommendations for the Engineering Sciences at the Universities and Technical Universities of the New Länder); 138 double-spaced typewritten pages, in German.

(g) "Empfehlungen zu den Agrar-, Gartenbau-, Forst-, Haushalts- und Ernährungswissenschaften sowie zu Lebensmitteltechnologie und Veterinärmedizin an den Hochschulen der neuen Länder und Berlin" (Recommendations to the Sciences of Agriculture, Gardening, Forestry, Home Economics, and Nutrition as well as to the Technology of Foodstuffs and to Veterinary Medicine at the Colleges on the new Länder and Berlin); 155 double-spaced typewritten pages, in German.

(h) "Stellungnahme zu den außeruniversitären Forschungseinrichtungen der ehemaligen Bauakademie der DDR "(Position Paper on the Extra-University Research Institutions of the former Civil Engineering Academy of the GDR); 169 double-spaced typewritten pages, in German.

(i) "Umweltforschung in den neuen Ländern. Zwischenbericht und erste Empfehlungen" (Environmental Research in the New Länder. Intermediate Report and Recommendations); 30 double-spaced typewritten pages, in German.

(j) "Stellungnahme zum Institut für Kosmosforschung, Berlin und zur Satellitenbodenstation, Neustrelitz (Land Mecklenburg-Vorpommern)" (Position Paper on the Institute for Cosmos Research, Berlin and the Satellite Ground Station Neustrelitz (Land Mecklenburg-Vorpommern)); 27 double-spaced typewritten pages, in German.

4.2.2. "KAI"  
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The Recommendations by the Wissenschaftsrat were considered by the appropriate political bodies and basic decisions were made. After these decisions, a body was needed to implement them. The Ministry of Research and Technology established such a body in the former headquarters of the GDR Academy of Sciences in the "Otto Nuschke Straße 22/23" (now renamed Jäger Straße again). The name of this body was:

"Koordinierungs- und Abwicklungsstelle für die Institute und Einrichtungen der ehemaligen Akademie der Wissenschaften der DDR" (Coordination and De-Establishment Agency for the Institutes and Institutions of the former Academy of Sciences of the GDR), now abbreviated as KAI-AdW.

On 1 January 1992, this agency has been re-established as an association named:

"Koordinierungs- und Aufbau-Initiative für die Forschung in den Ländern Berlin, Brandenburg, Mecklenburg-Vorpommern, Sachsen, Sachsen-Anhalt und Thüringen" (Coordination and Establishment Initiative for Research in the Länder Berlin, Brandenburg etc.) abbreviated as KAI-eV.

Person of contact:

Dr. Helmut Rabenhorst  
KAI eV  
Haus 4.1, Sekretariat  
Rudower Chaussee 5  
D/O-1199 Berlin  
Telephone: +37 (2) 6704-2974  
Telefax: +37 (2) 6704-5665.

The headquarters is located in central Berlin:

KAI eV  
Jäger Straße 22/23  
D/O-1986 Berlin  
Telephone: +49 (030) 392-8683 or: +37 (02) 2037-0343  
Telefax: +49 (030) 392-9658 or: +37 (02) 200-4203  
Telex: 114426 adw dd.

The Director of KAI is Mr. Grübel, while Dr. Rabenhorst is in charge for international relations.

KAI should not be confused with another German institution charged with transitions after the reunification: the

Treuhand Anstalt  
President: Frau Birgit Breuel  
Leipziger Strraße 5-7  
D/O-1080 Berlin  
Telephone: +49 (030) 3154-01, or +37 (02) 2323-01  
Telefax: +49 (030) 3154-1029, or +37 (02) 2323-1029

(with an office in the USA:

Treuhandanstalt, New York Office  
Managing Director: Christoph Urban  
39th floor  
599 Lexington Avenue  
New York, NY 10022  
Telephone: +1 (212) 888-4073  
Telefax: +1 (212) 888-6090)

has become widely known in the US. The Treuhandanstalt has the task of privatizing the state-owned industry in the former GDR. That includes the selling of about 10,000 companies, in part with their own research laboratories. At the end of 1991, about 4,000 already had been sold. This agency is also looking for American buyers. Federal Chancellor Kohl as well as Ms. Breuel have given speeches within the USA, stressing these offers.

As to be expected, there may be gray areas of cognizance between KAI and TREUHAND. KAI is not involved in privatizing any of the many Institutes of the former Academy of Sciences in Berlin-Adlershof (a southeastern suburb of Berlin)\*, it is, however, interested in attracting West-German or foreign (including American) private companies or institutes to establish branch institutes, branch laboratories and offices or companies there. Basically, there does not seem to be an overlapping of responsibilities between KAI and TREUHAND. It is, however, conceivable that in individual cases a kind of conflicts may occur: a foreign company may consider the choice of either buying an existing East-German company or establishing a new branch on its own in Adlershof.

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\*) because following the recommendations of the Wissenschaftsrat these institutes are reformed but remain with either one or more governments or established German Research Networks as carriers.

4.2.3.FEDERAL MINISTRY OF RESEARCH AND TECHNOLOGY, FMRT  
(= Bundesministerium für Forschung und Technology, BMFT):  
=====

The FMRT has repeatedly been mentioned previously in this report. It is the agency of the government of the FRG responsible for scientific research. This fact is expressed, for example by the "Bundesbericht Forschung" (= Federal Report on Research) and the supporting publications, listed and briefly described below. It is a comprehensive and informative source for nearly all aspects of research in Germany, including its philosophy and realization. It provides data on finances, institutions, personnel etc. It is published every fourth year, the next one expected later in 1992, supplemented by a somewhat shorter English version. The information provided below gives an idea of the order-of-magnitude of the size of this task. Following the German re-unification, the FMRT has been the top executive government agency overseeing the creation of the new "Research Landscape" in the five new länder and East-Berlin. This additional assignment has increased its task by 15 to 30%, not counting the immediate efforts caused by the transition process itself. In this function, the FMRT has submitted a report on the state of the transformation in East Germany to the Bundestag (German parliament) on 29 November 1991 ("Forschung und technologische Entwicklung in den neuen Bundesländern", 19 pp plus 2 appendices). Furthermore, on 15 January 1992, the Federal Government and the Governments of the new länder have issued a joint report on the realization of the recommendations of the Wissenschaftsrat ("Bericht des Bundes und der neuen Länder sowie des Landes Berlin zur Umsetzung der Empfehlungen des Wissenschaftsrates gemäß Artikel 38 des Einigungsvertrages", 31 pp plus three voluminous appendices including descriptions of all related institutes - no page count, 21 mm thick). This report was the basis of discussion of a special conference held on 22-24 January 1992 in Berlin-Wannsee. Its minutes are not yet known to us.

The main aims of the FMRT are (quoted from Meyer-Krahmer 1989, p.79; see above under 3.3):

"The broadening and extending of scientific knowledge, thus it finances large parts of basic research as an important requirement for scientific and technological advance and contribution to cultural development;

the promotion of research and development in the fields of environment, health and labor, with the purpose of improving living conditions;

the direct and indirect support of entrepreneurs willing to take research and development initiatives, thus increasing the economic performance and competitiveness, which is crucial for the German economy depending on exports."

In 1989, the FMRT was divided into five divisions (l.c.):

"administration, research policy, finance, basic questions of research establishments;  
general promotion of research, coordination of research, international cooperation;  
energy, environment, technology assessment;  
information technology and production engineering, innovation policy, humanization of working conditions;  
aeronautics and space flight, transport, new materials".

In 1989, the FMRT had about 650 employees. An appropriate division for contact for Americans is:

Dr. Markus and Mr. Marc Sievers  
Referat 225  
Scientific and Technological Cooperation with Canada and USA  
Federal Ministry of Research and Technology  
Heinemann Straße 2  
D/W-5300 Bonn 2 (Bad Godesberg)  
Telephone: +49 (228) 59-3407, -2452  
Telefax: +49 (228) 59-3603  
Telephone of the switchboard: +49 (228) 59-1

REPORTS ISSUED BY THE FEDERAL MINISTRY OF RESEARCH AND TECHNOLOGY,  
FMRT (=Bundesministerium für Forschung und Technology, BMFT):

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(a) "Bundesbericht Forschung", published once every fourth year by the BMFT. The report for 1988 has 441 pages DIN A4.

Main chapters (title of chapters translated into English):

- I. Orientation and perspectives of the research policy of the Federal Government (43 p)
- II. Finances ("Resources") for science, research, and development in the Federal Republic of Germany (64 p)
- III. Points of emphasis in the promotion of research and development by the Federal Republic (80 p)
- IV. Policy for research and technology in the German länder (states) (30 p)
- V. International and intra-German policy on research and technology; international organizations and research facilities with German participation (45 p)
- VI. Sponsoring and Research Institutions in the FRG (63 p, listing 87 institutions)
- VII. Statistics (77 p with 41 tables, incl. 8 p - 4 tables - of internat. comparisons)

List of abbreviations(9 p),list of diagrams(2 p),subject index(32 p).

This report presents the assessment of scientific research in Germany. A finely detailed survey on the direct support for research by the FMRT is contained in the "BMFT Förderungskatalog" discussed below.

(b) "Report of the Federal Government on Research 1988" (Abridged version) 131 p DIN A4.

This report provides English translations of chapters I, II, V and, in part, VI of the more voluminous German report listed above under a.

(c) "Faktenbericht 1990", 432 p DIN A4

This is the annual actualization of the previous "Bundesbericht Forschung". Main Chapters (titles translated into English):

- I. Survey on Science, Research and Development in FRG 1981-1989/90 (6 p)
- II. Finances ("Ressources") for Science, Research and Development in the FRG (70 p)
- III. Points of emphasis for the sponsoring of research and development of the Federal Republic (100 p)
- IV. Policy of research and technology in the states (43 p)
- V. International and internal German policy for research and technology, international organizations and research facilities with German participation (25 p)
- VI. Sponsoring and research institutions in the FRG (71 p)
- VII. Statistics (79 p, incl. 9 p of internat. comparison)
- List of abbreviations (9 p)
- List of diagrams (1½ p)
- Subject index (13 p)

(d) "Facts and Figures 1990", DIN A4, 196 pages. This is an abridged English translation of the "Faktenbericht" (above, c), providing the preface, chapter I, excerpts from chapter IV, and address lists of research institutions and supporting organizations from chapter V.

(e) "BMFT Förderungskatalog 1990". Very small print on thin paper; DIN A4 ("landscape format").

This catalogue lists more than 5000 research projects directly supported by the BMFT (606 white pages), and, in addition, about 100 institutions receiving research funding without listing the individual projects there (13 green pages). Therefore, the individual research projects carried out by the Deutsche Forschungs-Gemeinschaft, the Max-Planck Gesellschaft, the Fraunhofer Gesellschaft, the Deutscher Wetterdienst etc. are not included here, there are other lists for them (we inform on these under the individual carriers in our chapter 4.5). The "Förderungskatalog" provides the title of the project, the name and/or affiliation of the principal investigator, the financial amount, and the time period of support. Detailed statistics (including the finances), diagrams and guidelines for utilizing the catalogue are contained at the beginning (19 white pages). The indexes include an alphabetical index on contractors or receivers of grants (115 yellow



pages), an alphabetical index on problem areas or research branches (5 blue pages), and a systematic index on research branches (13 red pages).

The content of the Förderungskatalog is also contained in the data bank FORKAT of STN International, see below under 4.7.

The best surveys on research support given by this Ministry (the FMRT) are to be found in the books mentioned above. In order to convey an impression on the scope of this "Catalogue" some statistical numbers are also quoted here, details can be found in the catalogue:

In 1987 and 1988 each, roughly the following amounts in million Deutschmark were spent (remember that the translation of the German terms into English is by necessity imprecise):

- Basic Research 2,800
- Government Long-Term Projects 1,400
- "Vorsorge-Forschung" (about Research for Future Needs) 900
- Market-Oriented Technology 3,000
- Infrastructure 430

In the same years, the number of institutes supported by the FMRT in the various länder was as follows:

- Nordrhein-Westfalen 1,500
- Baden-Württemberg 1,400
- Bayern (Bavaria) 1,100
- Foreign Countries 1,000
- with the other 8 länder of the (former) Republic having each less than about 500.

The following research fields are covered with the approximate amounts in million deutschmarks spent on each of them (averaged estimates):

- Special areas of basic research, in particular large equipment in the Large Research Establishments; e.g. Nuclear research, synchotrons, etc.; 950
- Ocean and Polar Sciences and Technology; 200
- Space Research and Technology; 1,100
- Energy Research and Technology; 1,370
- Environmental Research, Climatology, Safety Research; 380
- Research and Development for Health; 300
- Information Technology, incl. Manufacturing Technology; 900
- Biotechnology; 230
- Material Research and Technologies; 340
- Aeronautics and Supersonic Technology; 175
- Research and Technology for Surface Traffic; 220
- Geosciences and Raw Material Provision; 60
- Other Activities; 550

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The catalogue lists about 750 research subgroups.

To give an example of the details in this catalogue: The List on oceanography and polar research has 196 numbers; 25 of these numbers indicate group projects ("Verbund-Projekte") involving 74 individual projects, which amounts to a total of 245 projects. For each of them, the principal investigator of the project, the name of the project, the duration of support and the amounts of support are provided in the catalogue. These oceanographic and polar projects cover the following subfields of oceanic and polar sciences:

OCEANOGRAPHY:

Ocean Pollution, Ocean Sources for Nutrition, Cross-Sections and other activities; with 8 subgroups

Ocean Geology; with 3 subgroups

Ocean Research Tower "Nordsee"; with 1 subgroup

Ocean Research Vessels; with 2 subgroups;

OCEAN TECHNOLOGY:

Marine Raw Material; with 1 subgroup

Offshore Technology for Hydrocarbons; with 5 subgroups

Ship Technology, with 5 subgroups

Coastal Engineering, other & cross-section activities; with 3 subgroups;

POLAR RESEARCH:

five subgroups.

(e) The Federal Ministry of Research and Technology also publishes a number of smaller-size reports on individual research tasks, some in German, some in English. Here is a random selection:

Antarctic Research Programme of the FRG, Summary; 1980, 7 p

Meeresforschung und Meerestechnik, 1987, 80 p

Förderschwerpunkt zum Treibhauseffekt, 1989, 38 p

Beitrag der BRD zur geowissenschaftlichen Meeresforschung,

Bilanz und künftige Aufgaben, 1989, 46 p

Polarforschung, Bilanz 1974 bis 1987, 1987, 70 p.

(f) An older issue is called the "Förderfibel" (December 1975) providing information on how to apply for support of research, 140 p.

4.2.4. BUNDESMINISTERIUM FÜR WISSENSCHAFT UND BILDUNG (BMBW)  
= FEDERAL MINISTRY FOR SCIENCE AND EDUCATION  
=====

(quoted after Meyer-Krahmer p.81 (see chapter 3.3, above):

Since the beginning of 1973, the Federal Ministry of Education and Science (Bundesministerium für Bildung und Wissenschaft, BMBW) has had full responsibility at federal level from pre-school to university, including vocational education/training, educational assistance, further education as well as the promotion of science and research at universities (except for the responsibilities of the other ministries concerning vocational training)....The staff of the BMBW at the end of 1988 amounted to 390 members working in four divisions; the 1988 budget was approximately DM 3.5 billion. They planned to spend DM 1.2 billion on R&T in 1988 (compared to 7.6 by the FMRT).

Of interest as a background information is the small annual and trilingual publication of the BMBW called

Zahlenbarometer; Numerical Barometer; Baromètre numérique.

The 1991/1992 issue provides (on 39 pages) statistical tables and diagrams showing the basic structure of the German Educational System, population numbers in various age groups, occupations, educational units etc., finances. - In principle, the information is given for the old as well as for the new länder of the FRG. The fact that in the 1991/1192 issue information on the new länder is relatively sparse is probably due to the uncertainty of the situation there.

An address for more information is the following:

Bundesministerium für Bildung und Wissenschaft  
Referat IB6, Daten-Informationsstelle  
Heinemann Straße 2  
D/W-5300 Bonn 2  
Telephone: +49 (0228) 57-2372

Copies of this booklet may be requested there.

4.2.5. BUNDESMINISTERIUM DER VERTEIDIGUNG (BMVg)  
(= Federal Ministry of Defense, FMoD)  
=====

As in many other countries, the German Ministry of Defense maintains its own research and technology program. Because financial support for defense research and technology in Germany is much smaller than in the USA\*, the German efforts are focussed on selected areas. Cooperation with foreign, allied, efforts in scientific research and technological development is supported in order to use resources more efficiently and to strengthen ties between partners. Basic research is conducted and also included in international cooperation if its topic is within the defined focus. For example, shallow-water oceanography as needed for specific technological developments, computer structures, and associated microelectronics are among such areas. Within FMoD, the Department Rü T (= Rüstung, Technologie = Armament, Technology) is in charge of research and technology. It is directed by

Ministerialdirektor Dr. Heyden  
Abteilung Rü T  
Bundesministerium der Verteidigung  
Postfach 1328  
D/W-5300 Bonn 1  
Germany  
Telephone: +49 (228) 12-4040  
Telefax: +49 (228) 12-5357

Within the German Defense research and technology establishment, we find the

Forschungsanstalt der Bundeswehr für Wasserschall und -  
Geophysik, FWG  
(Research Institute of the Federal Armed Forces for Underwater  
Acoustics and Geophysics,)  
Klausdorfer Weg 2-24  
D/W-4300 Kiel 14  
Director: Prof. Dr. Peter Wille  
Telephone: +49 (431) 7204-0  
Telefax: +49 (431) 7204-150.

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\*) according to a German estimate, the USA spend about 15 times as much as the FRG on military research and technology.

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Basic research (in the American definition of this term) for the FMOD is also carried out by the laboratories in various locations in Germany of "FGAN" the headquarters of which is

Forschungs-Gesellschaft für Angewandte Naturwissenschaften  
FGAN  
(Research Institution for Applied Sciences)  
D/W-5301 Wachtberg-Werthhoven  
Telephone: +49 (228) 8521  
Telefax: +49 (228) 856977;

and by institutes and laboratories of the Bundeswehr-Hochschulen (Defense Universities) in München (Munich) and Hamburg.

The Foreign Embassies of the FRG have, in Washington, London, Paris, and Rome, Counselors for Defense Research and Engineering. The present name and address in the Washington Embassy are:

Mr. Diethelm Stephan  
Embassy of the Federal Republic of Germany  
4645 Reservoir Road  
Washington, DC 20007-1998  
Telephone: +1 (202) 298-4288 [switchboard: +1 (202) 298-4000]  
Telefax: +1 (202) 298-4249.

4.2.6. RESSORT-FORSCHUNGS-EINRICHTUNGEN  
(about: Research Institutions of the Federal Ministries  
=====

In addition to the Wissenschaftsrat and the three ministries listed above under 4.2.3, 4, and 5, other Federal Ministries are also active in scientific research by having their own research facilities. They are called in German "Ressort-Forschungs-Einrichtungen". As taken from Meyer-Krahmer. p.191 ff (see chapter 3.3, above, valid only for the old 11 länder before reunification of Germany), the following federal ministries maintain their own research institutes or agencies or organizations including such institutes; several of which are located outside of Germany:

Federal Ministry for Labor and Social Affairs (2 institutes)  
Federal Ministry for Post and Telecommunications (2)  
Federal Ministry for Regional Planning, Building and Urban  
Development (1)  
Federal Ministry for Research and Technology (FMRT, BMFT) (7)  
Federal Ministry for Youth, Family, Women and Health (3)  
Federal Ministry of Defense (1\*)  
Federal Ministry of Economic Cooperation (1)  
Federal Ministry of Economics (2)  
Federal Ministry for Education and Science (1)  
Federal Ministry of Food, Agriculture and Forestry (13)  
Federal Ministry of The Environment, Nature Protection, and  
Reactor Safety (2)  
Federal Ministry of the Interior\*\*(4)  
Federal Ministry of Transport\*\*\* (5)  
Foreign Office (1)

As to the five new länder, the recommendations of the Wissenschaftsrat ("Allgemeiner Teil") list 18 of "Ressort-Forschungs-" institutions under Federal Ministries, of which about 10 concentrate on agriculture and forestry. The German Weather Service (under the Federal Ministry for Transport) soon after reunification established there its largest research institute: the traditional and world-renowned Meteorological Observatory in Potsdam. Some other institu-

- 
- \*) Meyer-Krahmer lists 2, but only one is really an institute under the FMoD, the other one is an organization funded by FMoD.  
\*\*) The mission of the Federal Ministry of the Interior is different from the Mission of the US Department of the Interior (DoI), but the four institutes deal with topics which, in principle, could also be of interest to the U.S. DoI.  
\*\*\*) The Federal Ministry of Transport is also cognizant for the German Weather Service which counts in this list as one unit but in fact has several research institutes (Meteorological Observatories).

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tions were recommended to become direct parts of existing (i.e., West-German) institutions under the ministries. With regard to "Ressort-Forschung" under the ministries of the new länder, see brief notes below under 4.4.; they, too, are mostly oriented to agriculture, but also include some institutes in the hard sciences.

4.3. COMMON AGENCIES OF LÄNDER AND FEDERAL GOVERNMENTS  
=====

4.3.1. Ständige Konferenz der Kultusminister  
der Länder in der Bundesrepublik Deutschland, KMK  
(approximate translation: Standing Conference of the  
Ministers for Education, Sciences, Arts of the Länder  
in the Federal Republic of Germany)  
-----

A special committee, established in Bonn, serves for discussions between these ministries of the various länder. It is able to make binding decisions by unanimous vote. The full name and address of this committee is:

Ständige Konferenz der Kultusminister der Länder  
in der Bundesrepublik Deutschland  
Person of contact: Dr. Schulz-Hardt  
Nassestraße 8  
Postfach 2240  
D/W-5300 Bonn  
Telephone: +49 (0228) 501-0  
Telefax: +49 (0228) 501-301

A comprehensive source of information about this conference is their handbook called "Handbuch für die Kultusminister-Konferenz 1990" which describes the various commissions working under this Conference, gives names of leading persons, describes the "Declarations" and Recommendations and Agreements" issued by the Conference - all this including not only schools but also universities and continuing education institutions. Included are documents on a broad scope of international activities. A special part provides verbatim the important documents and statistics. Among the organizational diagrams is a very informative one depicting the scheme of the educational system in (West-) Germany. While the text refers to German reunification at many places, the substance of the information is restricted to the eleven old länder.

For general information on the research work of the (old and new) länder, this Conference is a most appropriate address.



4.3.2. Konferenz der Rektoren und Präsidenten  
der Hochschulen in der Bundesrepublik Deutschland  
(HochschulrektorenKonferenz, HRK)  
(approximate translation: Standing Conference  
of the Rectors and Presidents  
of the Universities and Colleges in the FRG)  
-----

The former name of this conference was "Westdeutsche Rektorenkonferenz, WRK". Under this name annual reports were issued ("Arbeitsbericht") and from time to time collections of statistical data on educational issues in Germany ("Arbeitsmaterialien, Zusammenstellung bildungspolitischer Daten") were published.

In February 1992, this conference had 222 members\*. They are represented in a "Plenum" and in a "Senate" but have different quota of votes. In April 1991, when there were 217 members, the distribution of votes can be typified by the following examples:

The 74 representatives of the universities, technical universities etc. had 74 votes in the Plenum and 23 in the Senate; the 6 representatives of Pedagogical Colleges had 3 votes in the Plenum and 21 in the Senate; the 84 representatives of vocational colleges had 11 votes in the Plenum and 3 in the Senate; and so on.

President of the HRK is Prof. Hans-Uwe Erichsen. The HRK has an office in Bonn with approximately 40 employees. The Secretary General is Dr. Josef Lange. The address is:

Hochschulrektorenkonferenz  
Ahrstraße 2  
D/W-5300 Bonn 2  
Telephone: +49 (0228) 887-0  
Telefax: +49 (0228) 887-110

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\*) according to: Rainer Klofat: "Zwischen Altlasten und Überlast" (a report on the HRK). RHEINISCHER MERKUR No.,9, p.13; 28 Feb 92.

4.3.3. Bundes-Länder Kommission für Bildungsplanung.  
(Commission of the Federal Republic and its Länder for  
Planning in General Education)  
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On top of its routine obligations, this Commission has now the additional task to connect the efforts of the Federal Government and the Länder Governments in the restructure the "University Landscape" and the non-university research, based on the recommendations of the Wissenschaftsrat. Since the so-called "Institutes of the Blue List" are characterized by the fact that the Federal Government and the cognizant Land Government pay each 50% of their costs, these institutes are a natural area of effort for this Commission. A special list of 3 February 1992 provides a (then) complete list of these institutes in all of Germany; of these are 9 in East-Berlin, 8 in Brandenburg, 4 in Mecklenburg-Vorpommern, 7 in Sachsen, 4 in Sachsen-Anhalt, and 2 in Thüringen, together 34 in East-Germany - versus 44 in the eleven old länder. A special booklet gives all-around information on this Commission:

Informationen über die Bund-Länder Kommission für Bildungsplanung  
und Forschungsförderung (BLK) Bonn 1991, 169 pages

including lists of institutions, information on finances, essential laws verbatim, covering a very broad range of research- and education-related activities.

The Commission has published almost 70 public reports on Education Planning, Innovations in Education, and Promotion of Research. In addition, annual reports (that of 1990 has 63 pages) give statistics, including finances and names of persons and institutions.

The address is: BLK- Geschäftsstelle  
Friedrich-Ebert-Allee 39  
D/W-5300 Bonn 1  
Telephone: +49 (228) 5402-0  
Telefax: +49 (228) 5402-150.

The Secretary General is Ministerialdirigent Jürgen Schlegel, in charge for promotion of research are Ministerialrat Dr. Wolfgang Paulig and Regierungsdirektor Eberhard Wagner.

#### 4.4. LÄNDER AGENCIES

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##### 4.4.1. Remark on the Research Situation in the Länder

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The traditional German name for länder ministries cognizant for cultural affairs etc., was "Kultus-" sometimes also "Kult-" Ministry. In most cases, they were responsible for all forms of education in that land, including universities as well as adult "after-hours" education, for science, research, art, for museums, theaters, and for religious matters. More recently, some of these ministries modified their name or split into several separate units.

For the purpose of this REPORT, we quote only the ministries which are responsible for scientific research in the five new länder and for the former eastern part of Berlin. It is, however, important to know that other länder ministries also may and do conduct research, establishing their own scientific institutions. In the German usage, they are mostly called "Ressort-Forschungs-Einrichtungen". At present, we do not have enough information on these to provide lists etc.

German länder may indeed be quite active in research. For example, the land Nordrhein-Westfalen (one of the eleven "old" länder) issues through its Minister for Science and Research voluminous reports. The Report for 1986 has a part called "Faktenteil 1986" (= collection of facts from 1986) which provides on 294 pages detailed statistics in tables and diagrams on research activity in that land\*. It deals with research at the various types of universities in that land which is financed by support from sources outside of the universities themselves (i.e. in addition to the budgeted expenses of the university administrations). The amount of such support in 1986 was over DM 400 millions.

A detailed survey on research in the länder is contained in the "Bundesbericht Forschung" edited all four years by the Federal Ministry for Research and Technology (see above under 4.2.3.a), but not in its English translation. - It is probably too early to offer descriptions on similar efforts in the five new länder. The 1992 edition of the "Bundesbericht Forschung" will include the five new länder for the first time. - In the following sections of this chapter, we quote their science ministries with addresses and the names of the persons who helped us in our investigations. Numbers of non-university research institutes located in each of the länder are also given; not all of the being in the natural sciences.

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\*) "Forschung in Nordrhein-Westfalen, Faktenteil 1988". Published by the Minister for Science and Research of the Land Nordrhein-Westfalen (Referat IV B 3); Völklinger Straße 49; D/W-4000 Düsseldorf 1; Telephone +49 (0211) 3032-270 or 3032-218; DIN A4, 294 pages.

4.4.2. BERLIN  
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Berlin, the Capital of the Federal Republic of Germany, is also one of the sixteen länder. As in the two other länder of Germany which are essentially large towns, Hamburg and Bremen, the government of the Land Berlin is called the "Senate", and the ministries of the Länder Berlin, Hamburg and Bremen are called "Senatsverwaltung" (Senate Administration). The Senate of Berlin governs all of Berlin within the borders established in 1920, i.e., including what was until 03 October 1990 the acting capital of the former GDR, often called "East-Berlin" (Berlin behind the Wall). The "Senat Administration" for research is:

Senatsverwaltung für Wissenschaft und Forschung  
(Senate Administration for Science and Research)  
Persons of contact: Herr Kurrek, Herr Wagenknecht  
Grieg Straße 5-8  
D/W-1000 Berlin 33  
Telephone: +49 (030) 8209-0566  
Telefax: +49 (03) 3032-433 or 3032-122

The Grieg Straße is in the quarter of Berlin called "Grunewald", near the lake "Hundekehle See", off Königsallee (via Oberhaardter Weg), the Western extension of the "Kurfürstendamm".

This office works closely together with "KAI", see above under 4.2.2.

At present, we find non-university research institutions in East-Berlin as follows: 13 "Blue-List" Institutes (i.e. institutes maintained by the Federal and the respective Land government 50:50); 5 "GroßForschungseinrichtungen" (Large Research Institutions, supported to 90% by Federal and 10% by Land governments); 5 institutions of the Fraunhofer Society; 10 Max-Planck Society institutions or working-groups; and several others mostly directed at agriculture research.

Eight institutes of the Blue List in East Berlin have formed a "Forschungsverbund Berlin e.V." (Research Federation Berlin, Inc.). Their common administration is at:

Forschungsverbund Berlin e.V.  
Jäger Straße 22/33  
D/O-1080 Berlin  
Telephone: +37 (2) 203-70-269  
Telefax: not yet known

These are the eight institutes, each mostly quoted by its acronym:

FMP: Forschungsinstitut für molekulare Pharmakologie (Research institute for molecular pharmacology);

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IAAS: Institut für Angewandte Analysis und Stochastik (Institute for applied analysis and stochastics)  
IGB: Institut für Gewässerkunde und Binnenfischerei (Institute for lake research and lake and river fishery)  
PDI: Paul-Drude Institut für Festkörperelektronik ("Paul Drude" Institute for solid state electronics)  
INOK: Institut für Nicht-Lineare Optik und Kurzzeit-Spektroskopie (Institute for non-linear optics and short-period spectroscopy)  
IWF: Institut für Wild- und Zootierforschung (Institute for research on wild and captive animals)  
FBH: Ferdinand-Braun Institut für Höchstfrequenztechnik ("Ferdinand Braun" Institut for super-high frequency technology)  
IKZ: Institut für Kristallzüchtung (Institute for crystal growth research)

#### 4.4.3.Brandenburg

The capital of Brandenburg is Potsdam, about 30 km southwest from the center of Berlin.

Ministerium für Wissenschaft, Forschung und Kultur  
(approximate translation: Ministry for Science, Research and the Arts and Humanities)

Person of Contact: Dr. Rainer Ruge

Deputy Director of Division for Science and Research

Friedrich Ebert Straße 4

D/O-1560 Potsdam

Telephone: +37 (033) 329-442 or 329-4450

or: +49 (030) 801-1009

Telefax: +37 (033) 27634

The house Friedrich-Ebert Straße 4 is near the western end of the "Lange Brücke", a bridge over the river Havel.

Non-university research institutions (refer to Berlin, above, for some explanations): 6 Blue-List Institutes; 4 GroßForschungsEinrichtungen; 3 Fraunhofer; 4 Max-Planck; several others, some of which located in more than one land.

#### 4.4.4. Mecklenburg-Vorpommern

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The capital of this land is Schwerin, 90 km due East from Hamburg.

Kultusministerium des Landes Mecklenburg-Vorpommern  
(approximate translation: Ministry for Cultural Affairs of the  
Land Mecklenburg-Vorpommern)

Person of contact: Dr. Martin Dube  
Head of Division for Promotion of Research

Werder Straße 124

D/O-2750 Schwerin

Telephone: +37 (084) 578-881, switchboard: 578-0

also indirect +49 (040) 655-1085 or 655-1071

Telefax: +37 (084) 578-637; or: +49 (040) 655-1061

The Ministry is in the large building called "Marstall".

Non-university research institutions (refer to Berlin, above, for some  
explanations): 5 Blue-List institutes, 0 GroßForschungsEinrichtungen;  
1 Fraunhofer; 3 Max-Planck, several others mostly agriculture

#### 4.4.5. Sachsen

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The capital of Sachsen (Saxonia) is Dresden, on the river Elbe.

Sächsisches Staatsministerium für Wissenschaft und Kunst  
(Saxonian State Ministry for Science and the Arts)

Person of contact: Dr.-Ing. Frank Schmidt

Division Director for Research

Archiv Straße 1

D/O-8060 Dresden

Telephone: +37 (051) 5982-587, switchboard: 5982-0

Telefax: +37 (051) 53735

or: +49 (030) 211-1390

or: +49 (089) 506-614

This Ministry is in the large Saxonian Government building at the  
right bank of the river Elbe, entrance from the river side.

Non-university research institutions (refer to Berlin, above, for some  
explanations): 11 Blue-List institutes; 1 GroßForschungsEinrichtungen;  
9 Fraunhofer; 3 Max-Planck; several others, e.g. agriculture.

#### 4.4.6. Sachsen-Anhalt

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The capital of Sachsen-Anhalt is Magdeburg, about 120 km WSW of Berlin or 100 km NW of Leipzig; on the left bank of the river Elbe

Ministerium für Wissenschaft und Forschung  
(Ministry for Science and Research)  
Person of Contact: Staatssekretär Prof. Dr. Hans-Albrecht Freye  
Breiter Weg 31  
(Postfach 4260)  
D/O-3040 Magdeburg  
Telephone: +37 (091) 58114  
Telefax: +37 (091) 53409 or 51959

The Ministry is on Breiter Weg (the former Karl-Marx Straße) north of Wilhelm Pieck Allee, near Alter Markt.

Non-university research institutions (refer to Berlin, above, for some explanations): 4 Blue-List institutes; 1 GroßForschungsEinrichtung; 2 Fraunhofer; 3 Max-Planck, several others.

#### 4.4.7. Thüringen

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The capital of Thüringen (Thuringia) is Erfurt, about 100 km WSW of Leipzig, 190 km NE of Frankfurt (Main).

Ministerium für Wissenschaft und Kunst  
(Ministry for Science and the Arts)  
Person of contact: Dr. Klaus Bartholmé  
Deputy Director of Science Division  
Werner Seelenbinder Straße 1  
D/O-5071 Erfurt  
Telephone: +37 (061) 386-3158 or 3159, switchboard 386-0  
Telefax: +37 (061) 386-3154

The Werner Seelenbinder Straße is at the southern border of the town, east from the autobahn access road (Gottwald Straße).

Non-university research institutions (refer to Berlin, above, for some explanations): 8 Blue-List institutes; 0 GroßForschungsEinrichtung; 1 Fraunhofer; 8 Max-Planck; several others.

## 4.5. ORGANIZATIONS

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### 4.5.1. INTRODUCTION

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In the following, legally independent organizations (some of them depending heavily on government funds for their operation) are listed in various groups: 4.5.2. Organizations maintaining research institutes and/or similar facilities, or representing the interests of such institutes and facilities; 4.5.3 Organizations supporting individual researchers or individual research projects, and 4.5.4. Academies and similar establishments.

Organizations, institutes and government agencies predominantly working for international relations or collaboration will be found below in Main Chapter 5. However, all or nearly all of the agencies and organizations etc. listed in Main Chapter 4 also maintain international relations and promote international collaboration. If, in the following parts of this chapter, a Person of Contact is mentioned, he/she will be related to a department in that organization charged to maintain and work for international relations. Some general remarks on international relations of German agencies and organizations will be given in chapter 5.1.

One organization, called KAI e.V., is described above under 4.2.2 because it had been, until 31 December 1991, a government organization and as such performed work of special interest in the scope of this REPORT.

Part B of this REPORT will contain a list of all institutions of the organizations listed in 4.5.2, except the industrial establishments (4.5.2.5). For the institutions located in the five new länder and East-Berlin, brief descriptions of their scientific interests will also be added.



#### 4.5.2. ORGANIZATIONS MAINTAINING OR REPRESENTING RESEARCH INSTITUTIONS

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##### 4.5.2.1. Max-Planck-Gesellschaft zur Förderung der Wissenschaften

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Address of the society:

Max Planck Gesellschaft zur Förderung der Wissenschaften e.V.  
(Max Planck Society for the Promotion of Science)  
Residenz Straße 1a  
Postfach 647  
D/W-8000 München 2  
Telephone: +49 (089) 2108-1  
Telefax: +49 (089) 2298-50  
Telex: 522203 mpgmu d

Person of Contact: Dr. Dietmar Nickel, Telephone: +49 (89) 2108-270.

Founded in 1911 under the name "Kaiser-Wilhelm-Gesellschaft zur Förderung der Wissenschaften" (Emperor Wilhelm Society for the Promotion of Science) in Berlin-Dahlem with v.Harnack as its first president, this society was different from the traditional academies which at that time did not maintain their own dedicated research institutes, and from the universities because there was no systematic teaching involved in its institutes. A high scientific reputation was quickly established thanks to v.Harnack and thanks to the appointment of outstanding scientists as directors of the institutes. These directors were given the liberty to select and pursue their own scientific interests within a rather broad scope of science (that scope being determined by the name of the individual institute). An idea attributed to v.Harnack was to get a good scientist and to build an institute around him. The liberty to determine the objectives is still alive, so much so that when a new director for an institute is appointed, the narrower scientific covered field may change, and with it many of the co-workers. However, certain traditions will automatically be established, and in many cases maintained.

Before German re-unification, the Biology and Medicine Section of the Max-Planck Gesellschaft (MPG) had 21 "Institutes" (MPI's) plus 7 additional research groups or laboratories; the Chemistry, Physics, Technology Section 20 Institutes, and the Humanities Section 10 Institutes. In addition, there were 7 "other institutions" (libraries, sub-societies). Two of the institutes are located in foreign countries (Italy and The Netherlands). The scientific staff of an institute is in the order of 100 persons, working in several departments. Among the scientists there are more than 1000 foreigners, with Americans being the largest group. More information is provided in the following book (in English):

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"MPG - The Max-Planck-Gesellschaft and Its Institutes, Portrait of a Research Organization" by R. Gerwin and B. Holzt, translated by R. Frieze. 3rd edition 1984, 140 pp., Press and Public Relations Department, MPG.

This book also describes the individual institutes and their departments with the scientific fields covered, the number of scientists etc. and the names of directors.

During the annual assemblies of the MPG, a keynote speaker usually presents a very interesting description of the situation and trends in German and international basic research and its connections to the general scientific world. This speech and the other addresses of the assembly are printed verbatim in the assembly report.

As soon as the possibility for a German re-unification appeared, the problem of the re-organization of research institutions in the GDR presented itself for all West-German research organizations. A decision had to be made almost immediately: Should the West-Germans suggest to the Berlin government that they might organize a system of research administration and general structure similar to that of the West-German one, with the intention to unify it with the West-German sister parts at a later time? Because of expected difficulties to unite two independent organizations into one (and also for other reasons), it was decided not to suggest such a move; instead, the West-German organizations set out to prepare a take-over of individual East-German institutes into the existing West-German structure. Such preparations began in parallel within the organizations. See, for example, our description of the Wissenschaftsrat in chapter 4.2.1. The Max-Planck Society began its own preparations independently. Because not enough was known about the status of research in the GDR, a new structure was proposed: the establishment of Max-Planck Arbeitsgruppen (Working Groups) under scientists with an acknowledged reputation. The plan was and is to let such a group work for about five years, financed by the Max-Planck Society, and to decide then whether they should be incorporated into universities or transformed in Max-Planck Project Groups or Institutes. As the unification progressed and contacts with the East improved, more such Arbeitsgruppen were established, all in some form of relationship with a university in the five new länder or the Humboldt-University in East-Berlin. Also, it was realized that in two cases, the level of research as well as the need for the promotion of that particular type of research were high enough to permit the establishment of two Max-Planck Institutes from the very beginning. A list of the Arbeitsgruppen and the two Institutes is given below in chapter 7.6.

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We add a more recent description of the Max-Planck Society here:

*Copy of NSF Europe Report No. 55, dated 01 June 1992:*

**The Max Planck Society and Research  
in the New German States**

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**SUMMARY:** The Max Planck Society has used several mechanisms in its activities to assist the modernization of research in the New States\* in eastern Germany. Much of the Society's resources are, and will for the next few years be, directed toward this modernization task.

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This report is based upon a visit to the Max Planck Society (Max Planck Gesellschaft - MPG) headquarters in München (Munich) on 24 April 1992. Frau Beatrice Fromm is in charge of the MPG programs in the five new German States which formerly comprised the German Democratic Republic (DDR=GDR). Except where otherwise indicated, the opinions stated herein are those of Frau Fromm - as understood by the drafter.

To understand what the MPG has done with respect to the reform and reconstruction of research in the new States, something should be said about the role of the MPG itself. The MPG is an autonomous organization, making independent decisions but relying on public funds. It tries to contribute to national objectives while at the same time trying not just to be used. The short-fuse requirements of the government and the MPG desire to act in accord with its tried and true principles led to some difficulty initially. The MPG tried to transfer its principles to the new States - supporting research at institutes is the form that the MPG uses to support research. In addition, the MPG does not interfere with universities but should be subsidiary to the university, doing things which can't or won't be handled by universities. The highest standards of quality must also be adhered to in MPG-supported research. In the short run, the MPG has used a mechanism which it had previously established to support clinical research at universities. The MPG will establish research groups at a university with a five-year commitment. Small groups - three to six people - were supported on the assumption that they would later be integrated into the universities. Existing MPG institutes nominated groups and individuals in the east with whose work they were familiar. This was done before the

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\*) In this NSF report, the word "State" is used to identify what we have called in our report a "land" (plural "Länder") because of the German indication that using the word "State" may imply an inaccurate definition when compared with the American States.

Wissenschaftsrat evaluations [The Wissenschaftsrat is a kind of national science council which evaluated research groups in existence in the new States at the unification of Germany. It made recommendations on whether to continue or modify the work, and with how many people it should be carried out.\*\*] An MPG institute in the west will be linked to each of the groups in the east for five years.

Twenty-eight groups were set up in this way through the end of the program in September 1991. They are located in seven universities in all, with eight at Humboldt University and seven at Jena. To some extent, this activity has interfered with the restructuring of the universities in the east. At the beginning, having the MPG research groups was a financial benefit but there was also some conflict with university autonomy. There are contracts between the MPG and the universities, providing that the universities will grant chairs and professorships (with MPG funds) to MPG research group leaders during 1992. The object of this experiment is definitely integration into the university. With perhaps only one exception, these MPG research groups will not become MPG research institutes.

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Economic Sciences      European Integration

Neurophysiological Research

Infectious Biology      Nonlinear Dynamics

Molecular Plant Physiology

Enzymology of Peptide Binding

Theoretical Biology

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\*\*) compare our description in chapter 4.2.1 of Part A of this REPORT

**Candidates for MPG Institutes  
in the New German States**

The MPG also asked its institutes for suggestions about setting up new institutes in the east. This is an important decision, as can be seen by the fact that only 15 new institutes were set up in [West] Germany during the past 20 years. It is not possible for the MPG to take on as one of its institutes any research activity that is less than the best. The institutes provided 25 proposals, and eight of these are moving to the next stage in the process. One of the research groups in Halle [**Enzymology of Peptide Binding**] is being considered as an institute in order to save the researchers for Germany.

The Wissenschaftsrat review process was independent, though MPG members participated. The members of the former Academy of Sciences of the DDR thought that the MPG, as the closest analog to the Academy, might just take over the Academy research institutes. The Wissenschaftsrat review, however, resulted in requests to the MPG to take over only a handful of those institutes, including the (now) MPG Institute for Microstructure Physics in Halle, the MPG Institute for Colloid Chemistry and Boundary Layer Research, the Berlin Branch of the MPG Institutes for Plasma Physics, and the Berlin-Aldershof Branch MPG Institutes for Extraterrestrial Physics.

The MPG is currently looking for the right sites on which to build the facilities for the new institutes. Proximity to a good university is important, as is availability of students. The establishment of new institutes has to take into account the whole process - including the location of existing institutes, state of development of universities, etc.

The Wissenschaftsrat also asked the MPG to assist with the organization of humanities in Germany, including in the east. Centers for the humanities are being set up for three years. Appointments of 100 researchers have been made for three years. These centers have been set up within weeks, concentrating on such themes as European Enlightenment and the History and Philosophy of Science.

The next three to five years will be difficult, but with patience and good spirit, things will work out right. The events of the last two years had some deleterious results on the effectiveness of research in the western part of Germany, including on quality. Up to now, the negative effect has not been great. However, as some initial optimism about unification declines, and assuming that the financial situation in Germany gets worse, there will be government cutbacks. The Finance ministries of both national and State governments will require budget reductions in the west to finance the east. For the MPG itself, growing from 60 to 65 institutes is

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not a problem but growing from 60 to 80 institutes will be a big problem. The MPG received an 800-position supplement to its authorization for staffing the institutes and groups in the east. It is asking for an additional 150 positions in 1993. While there may be some further increases in 1994 and 1995, after that there will be no new positions, and the authorization will likely decrease as the university-based groups are phased out of the MPG. Because of the requirements of the east, it is unlikely that new MPG institutes will be possible in the western part of Germany for the next ten years.

**NSF/Europe Comment:** The Max Planck Society has regained its aplomb after a slightly rocky start in finding the role it could appropriately and enthusiastically play in the modernization of research in the New States. The evolution to an MPG institute will not come to all of the former Academy institutes or to any but a handful of research groups in the east. The impact of having the MPG actively involved in the modernization process is nonetheless great because of its prestige and considerable resources. Despite its conservative reputation, the MPG will have been profoundly affected by its participation in the unification - characterized by a high German science official as "the defining event in the lives of this generation of Germans."

#### 4.5.2.2. Fraunhofer Gesellschaft

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Address of the society:

Fraunhofer Gesellschaft  
(Fraunhofer Society)  
Leonrod Straße 54  
D/W-8000 München 19  
Telephone: +49 (89) 1205-01 -  
Telefax: +49 (89) 1205-317  
Telex: 521 5382 fhgs d

Person of Contact: Dr. Ulrich Buller, Telephone: +49 (89) 1205-392

The Fraunhofer-Gesellschaft zur Förderung der Angewandten Forschung (FhG, founded 1949 in München) is the largest institution for applied research existing in Germany. In nine of the eleven old länder it has 37 research and service institutes (for the expansion into the five new länder and East-Berlin see below). Its turnover runs to 759 million deutschmarks, with contract research accounting for approximately 585 million. Fraunhofer Institutes make the results of their research available to clients in industry and government by way of contract research projects, aiming at transformation of results into commercial processes and marketable products. FhG has about 650 members. Its "Senate" consists of representatives from government, science and industry. Almost 400 trustees work for the institutes of the FhG. For the following "Focal Fields" publications are available upon request: (1) Microelectronics; (2) Information Technology; (3) Production Automation; (4) Production Technologies; (5) Materials and Components; (6) Process Engineering; (7) Energy Technology and Construction Engineering; (8) Environment and Health; and (9) Studies and Technical Information Exchange. An abbreviated version of the annual report is available in English; the one for 1990 had 19 pages with 4 diagrams and all relevant addresses; the German version has 115 pages, containing reports on technical achievements obtained in the report year.

The FhG publishes much information material, in part in English. The addresses and keynote speeches given at their Annual Assemblies are usually very interesting presentations of the situation and trends in German and international applied research and its connections to the industrial world (printed verbatim in the assembly reports).

Concept development and plans for an extension into the five new länder and East-Berlin became an important concern for the FhG immediately after the new development in East-Germany had become evident. Similar to the parallel development in the Max-Planck Society and many others (e.g. the Deutscher Wetterdienst, the German Weather Service, to name just one) an extension of a modified version of the West-German FhG structure was discussed and implemented. So far, there

are no new "Fraunhofer-Institutes" in the East; instead nine "Fraunhofer-Einrichtungen" (Fraunhofer Establishments) plus ten "Fraunhofer-Aussenstellen" (Fraunhofer Branch Labs of existing West-German institutes) were organized (see below under 7.4 and 7.5).

#### 4.5.2.3. ARBEITSGEMEINSCHAFT DER GROSS-FORSCHUNGS-EINRICHTUNGEN

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This "Working Community of Large Establishments for Research" is a common institution of the National Research Laboratories representing their interests, promoting the exchange of experience and information among the Labs, acting on common tasks, and assisting in the coordination of research and development. With an annual budget between 2,500 and 3,000 million deutschmarks (range 1989 to 1994) and a personnel number of nearly 10,000, the AGF represents the largest research unit in Germany. For most of its member institutions (also called AGF-Zentren, Centers), 90% of the budget comes from the Federal Government, while the remaining 10% are carried by the land in which an institutions is located.

In the eleven "old" länder, AGF has 13 Centers some of them composed of several institutes, located in more than one land. In the five new länder 11 institutes are being established (see chapter 7.2) some of them being a kind of branch of a West-German National Lab. The research tasks of the members of the AGF are classified in 8 main domains, and 3 "Cross-Section" domains. The main domains (and their subgroups) are:

1. Energy Research and Energy Technology
  - 1.1. Nuclear Fusion, Plasma Physics, and Plasma Technology
  - 1.2. Fusion Technology
  - 1.3. Regenerative Energy Systems
  - 1.4. Safety Research for Nuclear Facilities
  - 1.5. Nuclear Waste Disposal
2. Transport and Traffic Systems
  - 2.1. Aeronautical Technology
  - 2.2. Land Transport and Traffic Systems
3. Space Research and Technology
  - 3.1. Space Research
  - 3.2. Space Technology
4. Oceanography, Ocean Engineering, Polar Research
  - 4.1. Technology for the Utilization of the Oceans
  - 4.2. Polar Research



5. Health, Environment, Biotechnology
  - 5.1. Cancer Research
  - 5.2. Medical Research and Processes
  - 5.3. Biotechnology
  - 5.4. Analysis of changes in Climate and Environment
  - 5.5. Environmental Effects on Biological Systems
  - 5.6. Technologies and Strategies for the Protection of the Environment
6. Information and Communication Technology, Process Technology
  - 6.1. Basics of Information Technics
  - 6.2. Technologies of Information Technics
  - 6.3. System Technology
  - 6.4. Application of Information Technology
  - 6.5. Robotics and Processes
7. Basis Technologies
  - 7.1. Deep Temperature and Supra Conducting Technology
  - 7.2. Processes to Secure Raw Material Supply
  - 7.3. Material and Surface Research
  - 7.4. Technologies for Measurement and Processes
8. Research of the Basics of Matter
  - 8.1. Physics of Elementary Particles
  - 8.2. Nuclear Physics and Research on Heavy Ions
  - 8.3. Research on Solid State
  - 8.4. Nuclear Chemistry, Chemistry of Radiation and Photoelectricity.

**"Cross-Section" Tasks:**

1. Systems Research and Research on Consequences of Technological Development
2. Support for Industry, Government, and the Public
3. Cooperation with Universities.
4. Cooperation with Industry
5. Cooperation with International Partners
6. Support for Research in the New Länder of the FRG.

The publication "Programm-Budget 1991, AGF" (in German) gives details on the above points. Contact information for "AGF" is:

Arbeitsgemeinschaft der Gross-Forschungs-Einrichtungen (AGF)  
Ahr Strasse 45 (Wissenschaftszentrum)  
D/W-5300 Bonn 2  
Telephone: +49 (228) 37674-1  
Telefax: +49 (228) 376744  
Telex: 8 85 420 wz d.

4.5.2.4. ARBEITSGEMEINSCHAFT FORSCHUNGSEINRICHTUNGEN BLAUE LISTE  
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In 1975, the Federal and Länder Governments signed an agreement on common research promotion. There, the "Groß-Forschungs-Einrichtungen" (see 4.5.2.3), the Max-Planck (4.5.2.1) and Fraunhofer (4.5.2.20) institutes were confirmed but a desirability for a further kind of research institutes was also acknowledged: non-university institutes the importance and influence of which exceed the borders of the land in which they are located, and the research done there being of common government interest. A first list of such institutes was printed in 1977 on blue paper. In 1991, there were 47 such institutes in the eleven "old" länder, employing almost 5,000 people and requiring more than 500 million deutschmarks for their operation. At the German reunification, about 30 more such institutes were planned for the five new länder and East-Berlin.

In 1990/91, the need for a common representation led to the foundation of the AG-BL:

Arbeitsgemeinschaft der Forschungs-Einrichtungen Blaue Liste  
(Association of the Research Institutions of the Blue List)  
Ardey Straße 67  
D/W-4600 Dortmund 1  
Telephone: +49 (231) 1084-204  
Telefax: +49 (231) 1984-308.

By July 1991, 33 institutes of the Blue List had become members of the AG-BL, the number has significantly increased since. - The scientific field covered by research in the Blue-List institutes is divided into eight sections:

- I. Humanities, Social Sciences (other than II, III, and IV)  
(6 institutes)
- II. Economic Sciences (4 institutes)
- III. Education Sciences (4 institutes)
- IV. Medicine (6 institutes)
- V. Biology (3 institutes)
- VI. Sciences (other than IV and V) (3 institutes)
- VII. Information and Documentation (6 institutes or libraries)
- VIII. Museums (2 museums).

The individual institutes in the eleven old länder (if they were members in July 91) are described in detail in the brochure "Dokumentation 1991" published by the AG-BL, in German, 80 pp.

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#### 4.5.2.5. ARBEITSGEMEINSCHAFT INDUSTRIELLER FORSCHUNGS-VEREINIGUNGEN

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The     Arbeitsgemeinschaft Industrieller     Forschungs-Vereinigungen  
          "Otto von Guericke" (AiF)  
          (approximate translation: Cooperative Group of Associations of  
          Establishments Doing Research for Industry and Commerce)  
          Bayenthalgürtel 23  
          D/W-5000 Köln 51  
          Telephone: +49 (221) 37680-0  
          Telefax:     +49 (221) 37680-27

President of the AiF: Prof.Dr.-Ing, Dr.-Ing.e.h. Otto H. Schiele.

The AiF has as its members more than 100 associations, societies, etc. of totally more than 10,000 mostly small or medium-size independent establishments doing research for a variety of industrial and commercial areas. Research laboratories belonging to industrial or commercial companies are not included. The AiF was founded in 1954, legally it is a private, licensed, non-profit association.

In 1992, the AiF, Branch Office Berlin \*, published the second edition of a book:

Selbständige wirtschftsnahe Forschungseinrichtungen in den neuen Bundesländern.

(approximate translation: Independent Establishments Doing Research for Industry and Commerce, in the new federal länder).  
222 pp.

In this book 191 research institutions in the five new länder and East-Berlin are described. This includes some of the Blue-List- and the Fraunhofer institutions which we have referred to above in other chapters. The book also describes the new National Research Laboratories (GroßForschungsEinrichtungen) in the new länder. International contacts and relations of the institutions are often mentioned in some detail.

AiF publishes "Forschungsberichte", "AiF Mitteilungen Forschung und Entwicklung", and the biannual "AiF Handbuch".

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\*) address:     AiF Aussenstelle Berlin  
                  Leiziger Straße 5-7  
                  D/O-1086 Berlin  
                  Telephone: +49 (30) 315457-05 or +37 (2) 232357-05  
                  Telefax: +49 (30) 315457-24 or +37 (2) 232357-24.

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#### 4.5.3. ORGANIZATIONS SUPPORTING RESEARCHERS AND/OR PROJECTS

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##### 4.5.3.1. Introduction

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In this section 4.5.3 of our REPORT, we describe two very different types of organizations. Legally, they may be quite similar because they are all private. Among them, the Deutsche Forschungsgemeinschaft (4.5.3.2) is almost fully financed by governments and is also, by far, the largest organization in the FRG dedicated exclusively to the support of individual researchers and groups (sometimes almost ad-hoc groups) of researchers. The other organizations listed hereunder are financed by a very large variety of mostly private (or mixed private and public) sources. They together constitute a broad and much varied spectrum of Foundations ("Stiftungen"). Several forms of collaboration or coordination between them exist. Somebody has counted more than 5000 foundations in Germany. We are reporting on a selection of them which, for our purposes, seemed to be the most relevant ones; admittedly a very shaky definition. - One foundation, the Alexander-von-Humboldt Stiftung will be described in main chapter 5 because it is fully dedicated to exchange between Germany and other countries. However, all organizations listed here under 4.5.3 do promote, often pointedly so, international exchange as well as one of their tasks or intentions.

##### 4.5.3.2: The Deutsche Forschungsgemeinschaft (DFG)

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The Deutsche Forschungsgemeinschaft is roughly analog to the American National Science Foundation. There are certain essential differences (the author's impressions will be indicated in chapter 6.2). The DFG describes itself as follows (Jan.1991):

##### THE DEUTSCHE FORSCHUNGSGEMEINSCHAFT

The Deutsche Forschungsgemeinschaft (DFG) is the central self-governing organization of science and the humanities in the Federal Republic of Germany. Since the DFG was founded in 1920, its statutes have assigned it the continuing responsibility of promoting "science in all its branches". The DFG supports research projects in every discipline, especially within basic and applied research as pursued in the universities and technical academies. Particular attention goes to fostering oncoming generations of researchers.

In its promotion of research, the DFG distinguishes between assisting individual projects (individual Grants Program - Normalverfahren), and promoting cooperative activities (Priority Programs - Schwerpunktprogramme; Collaborative Research Centers - Sonderforschungsbereiche; Research Units - Forschergruppen; Central Research Facilities - Hilfseinrichtungen der Forschung).

Within the individual Grants Program any researcher can apply for assistance if he needs additional funds for a research project of his own choice. This assistance can be e.g. in the form of material or equipment, personnel costs, or funds for travel or help with printing costs. The oncoming generation of researchers is fostered by, in particular, grants for training, research and travel. The Priority Programs serve to assist cooperation by researchers - each in his own research institution - of various scientific institutions and laboratories within the framework of a common theme or field of research. During the usual duration of five years, new individual projects may be presented. The Research Unit designates a medium-term cooperation of a number of researchers who jointly pursue a research program, usually in one place. The joint research is facilitated by a concentration of the personnel and the equipment needed for scientific and technical services. Central Research Facilities (Hilfseinrichtungen der Forschung) are funded to provide technical services and equipment for particular fields of research on a national basis. The research ship METEOR and the Central Institute for Laboratory Animals are examples. Collaborative Research Centers involve groups of scientists who have, with the approval of their universities, combined their efforts so as to pursue joint research in areas in which the respective universities recognize a focal point of activity calling for long-range support. The Collaborative Research Centers aim at concentrating personnel and material facilities, the planning and coordination of research within and under the supervision of the universities, and interdisciplinary cooperation.

In addition, the DFG finances and initiates measures to promote scientific libraries, equips data processing centers with computers, makes available a variety of apparatus for research purposes, and reviews applications for equipping research centers with apparatus within the framework of the law for the improvement of university facilities.

On the international level, the DFG has taken over the responsibility of representing German science in international organizations. It coordinates and finances the German share in major international research programs. Moreover it supports, through individual measures such as travel grants, international scientific relations.

Another basic responsibility deriving from the DFG statutes is the providing of advice on scientific matters to parliaments and public authorities. A large number of commissions and committees of experts furnish basic scientific information for use in legislation - especially for laws involving the environment and public health.

In its legal form, the DFG is an association under civil law. Its members are universities, academies of science, research establishments of general scientific significance, the Max-Planck-Gesellschaft, the Fraunhofer-Gesellschaft, and a number of other scientific associations.

In order to fulfill its responsibilities, the DFG receives funds from the Federal Government and the eleven states, as well as a yearly contribution from the Donors' Association for the Promotion of Sciences and Humanities in Germany. In addition, the Federal Government makes available special-purpose grants, e.g. for congresses and conventions, for donations of books to installations abroad and for the exchange of scientists." (End of description).

Books published annually by the Deutsche Forschungsgemeinschaft:

"Deutsche Forschungsgemeinschaft, Tätigkeitsbericht 1989" (402 p)

"Deutsche Forschungsgemeinschaft, Tätigkeitsbericht 1988" (408 p)

both 16 x 24 cm, both containing many diagrams and tables, lists of the structures and persons working in the various sub-organizations.

"Deutsche Forschungsgemeinschaft, Programme und Projekte 1989" (973 p)

"Deutsche Forschungsgemeinschaft, Programme und Projekte 1988" (952 p)

both 16 x 24 cm, both listing the individual grants for projects etc., divided into the following chapters:

Promotion of individual projects in the standard procedure

Emphasis-Programs

Groups of Researchers

Supporting facilities for research

Special accelerated research areas

four groups of special support programs

Colloquia and Discussions

Scientific Events.

For individual projects only the title of the project, the name and affiliation of the Principal Investigator and the kind of grant are listed but not the amount of financing. The reason for this omission is that many if not most of these projects are also supported by other sources. For the Emphasis Programs and the Special Accelerated Research Areas, however, the amount for the whole program is provided.

Three times each year, the Deutsche Forschungsgemeinschaft issues a journal, in English: "german research" with illustrated reports on interesting results or problems of research done in Germany and on important developments in the research and research-support communities. Full annual subscription price \$36.00, publisher: VCH Verlagsgesellschaft mbH, P.O.Box 101161, D/W-6940 Weinheim.

Address:

Deutsche Forschungsgemeinschaft  
Kennedy Allee 40  
D/W-5300 Bonn 2  
Telephone: +49 (228) 885-1  
Telefax: +49 (228) 885-2221

Person of Contact: Dr. Frank Grünhagen, telephone +49 (228) 885-2231;  
telefax: +49 (228) 885-2460

4.5.3.3. Stifterverband für die Deutsche Wissenschaft  
(Donors Association for the Arts and Sciences)  
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This organization regards itself as representing the joint venture of the German Industry and Commerce to promote the sciences. The address of its headquarters is:

Stifterverband für die Deutsche Wissenschaft  
Postfach 164460  
Barkhoven Allee 1  
D/W-4300 Essen 16 (Heidhausen)  
Telephone: +49 (201) 8401-0  
Telefax: +49 (201) 8401-301  
Telex: 857 544

Donors in this donors' association are more than 160 foundations (and nearly 5000 other members) with a total capital of about 800 million deutschmarks, producing an amount in the order of 60 million each year for the purposes of the association. In most cases, the foundations bear the personal name of their founder (Stifter). As to be expected, each foundation is dedicated to a special task or group of tasks. Nevertheless, there are still important decisions, the Stifterverband has to make; it can set areas of emphasis. At the present time, one emphasis is not only on the re-unification of German science but also on the preparation for a German role as a bridge between the sciences in West and East. For example: parallel to the "Wissenschaftskolleg" in Berlin (listed here under 4.5.4), the establishment of a similar "Collegium Budapest - Institute for Advanced Study" in Hungary is planned as a meeting place for East and West. The Stifterverband also sees itself at the front of private contributions to the government owned science world. In the famous discussions "Villa-Hügel Gespräche" in Essen and in many other forms it debates and works out positions to the essential problems of science, science education and research.

In one program "Nachwuchsförderung" (Promotion of young scientists), the Stifterverband supported the "Studienstiftung des Deutschen Volkes" in promoting selected doctorates of German graduates at

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universities in the USA and in Great Britain. The Stifterverband supported the Deutsche Forschungsgemeinschaft in financing travels to, e.g., the Gordon Conferences in the United States. In helping these and a series of other international programs, the Stifterverband follows its clearly expressed opinion that for the long term no country and also no isolated group of countries can be scientifically "autark" (economically self sufficient).

In 1992, the Stifterverband and the Ford Foundation support a program to bring East-German post doctorates for one term of studying social, political or contemporary historical sciences at an American university, organized by the American Institute for Contemporary German Studies (see under 5.2.8).

The Stifterverband issues a bimonthly newsletter called "Forum Stifterverband" (8 pages each).

#### 4.5.3.4. Volkswagen-Stiftung (Volkswagen-Foundation)

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Address:

Volkswagen-Stiftung  
Postfach 810509  
Kastanien Allee 35  
D/W-3000 Hannover 81  
Telephone: +49 (511) 8381-0  
Telefax: +49 (511) 8381-344  
Telex: 922 965.

Secretary-General : Rolf Möller

After World War II, the Volkswagen company was converted into a joint stock company by a treaty between the Federal Government and the land of Lower Saxony (Niedersachsen). 60% of the share capital were placed into private hands; the Volkswagen Foundation was established in 1961 by endowing it with the proceeds from the sale of shares. The Federal Government and the Land each retained 20% of the capital stock of the new "Volkswagenwerk AG", it being agreed that any dividends on these holdings also accrued to the Foundation. This foundation is a non-profit foundation chartered under private law, at present with a capital of 2,800 million deutschmarks. Its aim is to promote science and technology in research and university teaching. It is free to support any area or field of science including the humanities; it has, however, limited its funding in principle to varying program areas. Support may be given for any type of expenditure encountered in research and university teaching. It is addressed to institutions, not to individuals. Grants must not substitute regular budgets and are, as a rule, limited to periods of five years. In 1990, the Foundation distributed more than 200 million deutschmarks. Since 1962, the grants amount to 3,600 million for about 19,000 projects.



In principle, applications received from abroad are treated like German applications. They should also be related to a particular program area and should describe a defined cooperation with German scholars or research institutions. Applications by German institutions may include expense of cooperating foreign partners. Applications from abroad may be submitted to the Volkswagen Foundation at any time, too. International cooperation, to mention just a few examples, may take the forms of joint studies carried out by German and foreign scientists; of tackling identical problems simultaneously but by different methods; of cooperation in mutually controlled and complementary studies; of mutual exchange of scientists or scholarship holders, or of guest professorships.

Among the program areas, we find the following:

- Environmental scarcity - ways of control and incentives to reduce pollution and waste;
- Organometallic Reactions directed toward organic synthesis;
- Interdisciplinary Joint Projects in the engineering sciences;
- Microcharacterization of Materials;
- Photonics: materials, basic physics, chemistry, components and integration;
- Neuroimmunology, mood and behavior;
- Partnerships in the field of engineering and natural sciences between institutes in the FRG and abroad.

The last mentioned program has been active since 1979 and has awarded grants of 33 million deutschmarks up to 1990, preferably for partnerships with developing countries. Partnership projects can be financed up to 100 kDM for 2 or 3 years, extensions up to 5 years are possible. The funds are earmarked primarily for the foreign partner but are granted to the German institute and managed by it.

The Foundation issues descriptions of the possibilities created by it, under the name of "Outlines" (in English). The annual report (in German), called "Bericht" (1990: 277 pp) provides many details, with names, statistics and diagrams.

#### 4.5.3.5. Robert Bosch Foundation

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Established by the Bosch family between 1962 and 1964, the Foundations owns approximately 90% of Robert Bosch GmbH, a worldwide enterprise manufacturing electrical, electronic, hydraulic and pneumatic equipment for the automotive industry. In addition, Bosch GmbH is active in a number of other industrial systems. The Robert Bosch Foundation uses its share of company profits solely for charitable purposes. Its goals are the furthering of International Understanding; Public Health and Welfare, and Education, Art, Culture and Science. Progress toward these goals is made through a growing

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number of international study and internship programs.

The Fellowship Program for Young Americans is one of these. The Fellows receive internships in such key German institutions as the Federal Government, the Federal Parliament and the headquarters of private corporations. This program is of interest to Americans with backgrounds in Business Administration, Economics, Public Affairs, Political Science, Law, Journalism, or Mass Communication.

In addition to this and other programs, the Foundation supports special projects that promise new ideas and developments or address the urgent needs of our time. - Funding is granted for usually not longer than five years. In 1990, grants in an amount of \$19 million were awarded. The list of these projects is very long and diversified. Usually, they are carried out by other organizations or agencies (German or American ones, some of which are described briefly elsewhere in this REPORT); the Bosch Foundation receives their proposals, reviews them and then decides on financing. - One interesting program is to accommodate American "Tutors" (graduate students) in student dormitories in the five new länder with the task to teach the English language there. - Since 1980, the Bosch Foundation has spent more than 19 million deutschmarks for the improvement of German-American relations which it considers as probably its most important obligation. There are also projects in which German and the American institutes or persons join to do work in a third country.

Address: Robert Bosch Stiftung GmbH  
Heidehof Straße 31  
D/W-7000 Stuttgart 1  
Telephone: +49 (711) 46-0840

U.S. Representative for the Bosch Foundation Fellowship Program:  
CDS International, Inc.  
330 Seventh Avenue, 19th floor  
New York NY 10001  
Telephone: (212) 760-1400  
Telefax: (212) 268-1288

There is also a  
Bosch Fellows Alumni Association  
Mrs. Georgia Meagher  
1259 Francisco Street  
San Francisco CA 94123  
Telephone: (415) 885-6361.

The Bosch Foundation, supported by the University of Missouri System, has published (see also under chapter 3.3):

The German Connection - a Compendium for Americans Planning to Study, Train or Work in the Federal Republic of Germany. By Rolf R. Mueller, University of Missouri - St. Louis, 1988; 170 pp.

#### 4.5.3.6. Carl Duisberg Society

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Carl Duisberg Gesellschaft eV.  
Hohenstaufenring 30-32  
D/W=-5000 Köln 1  
Telephone: +49 (221) 2098-0  
Telefax: +49 (221) 2098-111

American Representative (formerly "Carl Duisberg Society" at 425 Park Avenue, NY 10022):

CDS International, Inc.  
339 Seventh Avenue  
New York NY 10001  
Telephone: (212) 760-1400

This society has been busy for many years to provide young Americans (usually businessmen, engineers and agriculturists) with study experiences in Germany including complete professional training also for people already in leading positions. It administers a large number of diversified programs, e.g.:

- Congress-Bundestag Youth Exchange
- Career Training for Americans and Europeans in a foreign country
- The Robert-Bosch Fellowships (see above under 4.5.3.5)
- Internships for Americans in Germany and for Germans in America
- Workforce Solutions for America's Future: adapt European experiences in vocational training to the United States
- Internship for young German professionals in U.S. Companies
- Study Tours for U.S. business and educational groups to Germany and other European countries
- UNIDO Fellowship: managerial and technical professionals from developing countries to the U.S.
- Regional Programs, e.g. Berlin-Indianapolis Police Exchange
- Corporate Fellowship from 3 to 18 months advanced training in the U.S., supported by corporate sponsors
- Customized German Language training.

#### 4.5.3.7. Alfried-Krupp-von-Bohlen-und-Halbach-Stiftung

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The last personal owner of the famous Krupp Corporation, Alfried-Krupp von Bohlen und Halbach (1907-1967) established in his testament the foundation, officially founded in 1968. In its first twenty years, the foundation has spent 116 MDM (million deutschmarks) for science, 68 MDM for education, 125 MDM for health care systems, 14 MDM for supporting sport, and 37 MDM for more general cultural purposes. Its many programs, varying broadly in their purposes, reach out to many foreign countries in all continents. A survey lists about 50 programs. Of special interest for Americans are:

G804L44-05-17  
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Stipends for graduates in energy research (about 2 kDM per month for 2 years)

Award for Energy Research, 500 kDM, international

Support for the Salk-Institute, San Diego

Institute for East-West Securities, New York

Krupp-Foundation Internship Program in Germany for Stanford Students

Harvard University "Krupp Foundation Professor in European Studies"

John J. McCloy Fund of the American Council on Germany for stipends to young Americans and young Germans.

Not all of these programs are active at present.

Chairman of the Kuratorium of the Foundation: Dr.h.c.Berthold Beitz;  
the address:

Alfried Krupp von Bohlen und Halbach-Stiftung

Postfach 23 02 45

Hügel 15

D/W-4300 Essen

Telephone: +49 (201) 188-1

#### 4.5.3.8. Fritz Thyssen Foundation

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The Fritz Thyssen Stiftung was founded by Mrs. Amélie Thyssen in 1959 to promote science at universities and research institutions, especially in Germany. The foundation implements this objective by financing well-defined and reasonably limited research projects. In 1989, the following sums were spent (rounded figures):

Basics of research in humanities.....	3,900,000 DM
International relationships.....	1,600,000 DM
Government, Economy, Public .....	1,300,000 DM
Medicine.....	2,300,000 DM
Sciences.....	300,000 DM
Special program university teachers.....	3,700,000 DM
International Stipend and Exchange Programs.....	1,000,000 DM.

The international stipend and exchange programs involve the Princeton Institute for Advanced Studies; a lecture series on American politics, economy, society and history; lecture and discussion programs at American universities and others, predominantly in humanities and social sciences. The address is:

Fritz Thyssen Stiftung

Postfach 18 03 46

Am Römerturm 3

D/W-5000 Köln 1

Telephone: +49 (21) 23 4471.

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4.5.3.9. Studienstiftung des Deutschen Volkes  
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This foundation is well known in Germany for a broad support of selected students throughout their university years. While directed to Germans only, it will support their stipends when they have a good reason to go to a foreign country for the graduate and doctorate work. The address is as follows:

Studienstiftung des Deutschen Volkes  
Mirbach Straße 7  
D/W-5300 Bonn 2  
Telephone: +49 (228) 82-0960

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#### 4.5.4. ACADEMIES

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From the viewpoint of this REPORT, the probably most interesting scientific academy in Germany is the "Deutsche Akademie der Naturforscher Leopoldina" in Halle in the new land Sachsen-Anhalt. With the kind permission of the Science Section of the U.S. Embassy in Bonn, we are copying in the following a report on the Leopoldina which the Embassy has submitted to the State Department on 26 July 1991.

From: AMEMBASSY BONN

Subj: THE LEOPOLDINA: SURVIVAL OF A UNIQUE SCIENTIFIC ACADEMY  
IN EASTERN GERMANY

1. Summary: The Leopoldina Academy of Science in Halle is one of the few East German science institutions which has emerged from the GDR period with its reputation intact. With its distinguished international membership, the Leopoldina served the GDR regime as a window on the west. At the same time it protected dissidents within the East German science community. While its future mission within the unified Germany is now being debated, this ancient academy has supporters in Bonn. Its President, Dr. Parthier, has been nominated to join the German Science Council. He will also participate in the September 9-11 US/German Science Conference in Berlin. End Summary.

2. As the former GDR research establishment is being dismantled and reconstructed pursuant to directives from Bonn, an ancient scientific academy with its headquarters in a quiet back street of Halle has emerged with its reputation enhanced by its role in harboring dissidents within the East German science community. The Leopoldina traces its roots back to the 17th century, and its name to a charter issued by the Holy Roman Emperor, Leopold I, in 1687. It has viewed itself as an international scientific academy comprising german speaking scientists in the fields of medicine and the natural sciences.

3. The Academy was founded in Schweinfurt, and thereafter moved its seat and its library to different university towns within Germany, depending on the residence of the Academy President. It was located in Bonn in the years 1819-30. By the late 19th century, the Academy library had grown too large to be moved, and since 1878 the Academy has remained in Halle, where it occupies a Library/Administrative building and a relatively modern conference center near the library of the Martin Luther University. Its membership is centered primarily in Germany, Austria and Switzerland, but it includes a significant number of distinguished international scholars, including Nobel prize winners. The Academy's 1989 membership roll included 89 American scientists, 45 Soviet scientists, and modest representation from other West and East European countries.

4. The Leopoldina's reputation and distinguished international membership helped shield it from political pressure under both the Nazi and GDR regimes. The low point occurred in 1938 when it was forced to take Jewish scientists off its membership rolls. According to Bonn observers, the Academy was not completely free from political influence under the GDR, but it was able to host international conferences and to acquire scientific literature freely, and its officers were allowed to travel. This freedom was due in part to the reputation and efforts of the outstanding scientists who have headed the Academy, the physicist Heinz Bethge and plant biologist Heinz Parthier. At the same time, the Academy provided prestige and served as a window on the West for the GDR science establishment. This symbiotic relationship with the GDR regime must have been an uneasy one for the Academy, and it took steps to insure its privileged position by always filling the first Vice President position with an Academy member from Munich. Academy representatives signaled GDR authorities that at the first sign of interference, the Academy would close its doors in Halle and re-establish in Munich. Thus insulated, the Academy succeeded in giving a measure of protection to dissidents within the GDR science community. It provided a scholarly niche for inter-German exchanges, and its conference activities offered a venue for both East Germans and East European scientists to meet Western counterparts.

5. With the loss of its special identity within the GDR, Leopoldina is trying to determine what it should now do. Some of its members have suggested that it should reshape itself into a regional Academy with activities generally restricted to the five New States, thereby having a status similar to the Bavarian Academy and other regional science academies in Germany. It will have to allocate some of its resources, in any case, to activities supporting the state of SAXON-ANHALT, which will provide 20 percent of its budget starting in 1992. Other voices have pointed to the Academy's reputation and broad international membership, and have urged that the Academy should build upon this base to develop into a strong National Academy of Sciences. The FRG lacks national institutions on which to draw for scientific advice, such as the National Research Council or AAAS.

The European Science Foundation may eventually assume this mission, but there will probably remain considerable room for advisory bodies at the national level. The German Science Council provides advice on science policy and has undertaken major functions, including the organizing of peer reviews of the research institutes of the former GDR Academy of Science. However, the council has left a wide spectrum unfilled.

6. It would be a daunting task for the Leopoldina to step in. Its staff is modest and its facilities are outmoded. Unless its membership base is broadened to include engineering, it will not be able to provide advice on many of the technology policy issues faced

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by the Bonn Government. Despite its reputation, it would have two strikes against it as an East German-centered institute seeking to provide advice to the Bonn establishment. Roles that are more likely within the Academy's reach are in providing advice concerning the rebuilding of S&T capacity in Eastern Germany and in building links to science communities in Eastern Europe. The Academy does have supporters in Bonn who would like to help it play an effective role. Its President, Dr. Parthier, has been nominated to join the German Science Council. Dr. Parthier is also one of two East German scientists invited by the Humboldt Foundation to participate in the High level US/German Science Conference to be held in Berlin on September 9-11. In his capacity as president of Leopoldina, Dr. Parthier will participate in a panel discussion on German Unification and US/German cooperation, joining Research and Technology Ministry State Secretary Ziller and German Research Society (DFG) President Markl on the German side and NSF Director Massey speaking for the U.S. "(end of quotation).

The addresses of Academies in Germany (including two similar institutions) are:

Deutsche Akademie der Naturforscher Leopoldina  
August-Bebel Straße 50a  
D/O-4010 Halle  
Telephone: +37 (46) 247-14, -22, -23  
Telefax: +37 (46) 21-727

Rheinisch-Westfälische Akademie der Wissenschaften  
Palmen Straße 16  
D/W-4000 Düsseldorf 1  
Telephone: +49 (211) 34-2051

Akademie der Wissenschaften zu Göttingen  
Theater Straße 7  
D/W-3400 Göttingen  
Telephone: +49 (551) 3953-62  
Telefax: +49 (551) 3952-65

Heidelberger Akademie der Wissenschaften  
Postfach 10 27 69  
Karl Straße 4  
D/W-6900 Heidelberg  
Telephone: +49 (6221) 54-3265  
Telefax: +49 (6221) 54-3355

Akademie der Wissenschaften und der Literatur Mainz  
Geschwister-Scholl-Straße 2  
D/W-6500 Mainz 1  
Telephone: +49 (6131) 577-0  
Telefax: ++49 (6131) 577-40



Bayrische Akademie der Wissenschaften, in München;  
Marstall Platz 8  
D/W-8000 München 22  
Telephone: +49 (89) 23-0310

Sächsische Akademie der Wissenschaften zu Leipzig  
Postfach 440  
Goethe Straße 3-5  
D/O-7010 Leipzig  
Telephone: +37 (41) 28-1081, 29-2886

Aspen Institut Berlin  
Insel Straße 10  
D/W-1000 Berlin 38  
Telephone: +49 (30) 803-9041  
Telefax: +49 (30) 803-3568

Wissenschaftskolleg zu Berlin / Institute for Advanced Study  
Wallot Straße 19  
D/W-1000 Berlin 33  
Telephone: +49 (30) 89001-0  
Telefax: +49 (30) 89001-300

and there is a  
Konferenz der deutschen Akademien der Wissenschaften  
Geschwister-Scholl-Straße 2  
D/W-6500 Mainz 1  
Telephone: +49 (6131) 577-28  
Telefax: +49 (6131) 577-40

In the GDR before 1991, the  
Akademie der Wissenschaften zu Berlin  
Otto-Nuschke Straße 22/23 (now Jäger Straße 22-23)  
D/O-1086 Berlin  
was the governing agency for most of the non-university research  
institutes in the state. Very soon after re-unification, these  
institutes were separated from the Academy, evaluated by the West-  
German Wissenschaftsrat (chapter 4.2.1) and organized in new ways, as  
reported in chapter 3.2 and elsewhere in this REPORT. The fate of the  
Academy itself seems to be not yet decided. Plans to unite it with a  
West-Berlin Academy do not seem to have succeeded.

#### 4.6. ANNOTATED STATISTICS

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##### 4.6.1. Discussion of the Situation in the Former GDR

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The following estimations are based on information originally supplied before 1990 by the government or government agencies in the GDR\*. In the period from 1971 to 1989, a clear trend can be observed: the percentages of scientists (among the total number of people employed in Research and Development) was increasing from about 30% to 43%, while the percentage of technicians stayed about even at 25%. The percentage of support personnel shrunk from about 44% to 31%. In the same time period, the absolute number of all these people increased from about 90,000 to 132,000. In a parallel development, the number of scientists with a university degree increased more than the number with a somewhat lesser degree, while the number of support personnel stayed at about the same level.

About two thirds of the people in R&D were employed in the economy (incl. industry), about one quarter by the state in a more direct manner (Academy institutes etc.), and the rest (about one tenth) by universities. This distribution had changed during the period from 1971 to 1989: the employees in the economy decreased by about 10%, the ones employed by the state increased by about 25% and the ones in the universities increased by 20%. - The world-wide trend to degree-inflation may have played a role also in the GDR; nevertheless a certain trend for better quality and a little more emphasis on basic science can be assumed. - Comparisons of scientific employees in industry versus state are irrelevant because in all cases the state was the employer. Variations may only indicate a change in the organizational scheme or have other reasons. At the time of the reunification of Germany, however, these numbers were important because the various sectors were evaluated separately. The total population of the GDR was about 18 million. At that point, there were about 79,000 (45,000) scientists and engineers in R&D with university degrees, 50,000 (32,000) with lesser academic degrees, and not quite 70,000 (44,000) in support positions, giving a total of nearly 200,000 (120,000) persons working for Research and Development (in parentheses are the numbers working in industry and commerce, included in the other numbers). - All these numbers have to be taken with caution; they do not compare very well with numbers derived after reunification. The GDR's definitions of R&D were not the same as the ones used internationally in the West.

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\*) Our source for the above numbers is "Forschung und Entwicklung in der DDR", MATERIALIEN ZUR WISSENSCHAFTSSTATISTIK, issue no.6, SV-Wissenschaftstatistik im Stifterverband f.d. Deutsche Wissenschaft.

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Under the Academy of Sciences of the GDR there were 59 research institutions, 45 of which were in the natural sciences and 14 in the humanities and social sciences. West-German estimates of research personnel working in these and similar institutes at the time of reunification arrive at between 26,000 and more than 33,000, including more than 50% persons without university graduation.

#### 4.6.2. Survey on Finances for R&D in the FRG\*.

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In 1989, 18.2% of the overall expenditures for "Science" in the FRG were spent by the Federal Government either directly or through its support for institutes; 32.4% were made by the länder and communities; 48% by industry; and 1.4% by non-profit organizations; for a total of 89.4 billion\*\* DM.

R&D support by the Federal Government was provided by the Federal Ministry for Research and Technology (FMRT) at 53%, the Federal Ministry of Education and Science at 8%; the Federal Ministry of Economics at 7%; the Federal Ministry of Defense at 23% and other ministries at 10%. Not quite 30% of the expenditures are for basic research, a share which has steadily increased at least since 1981. This percentage and the amounts quoted above include expenditures of the Federal Government for expansion and construction of universities, 85% of which is counted here as contributing to basic research\*\*\*. Other than that, the scientific branches with the highest percentages going to basic research are marine research (59%); economic and social sciences (39%), geosciences (39%), biotechnology (37%), health sciences (37%), space sciences (31% basic).

In 1990, the Federal Ministry for Research and Technology in Bonn spent about 8 billion\*\* DM on R&D, plus about 700 million DM received from the former Ministry of Research and Technology of the GDR#. Of the 8 billion, about 3.3 were spent on R&D projects financed directly by the FMRT, about 3.1 went to financing R&D institutes for (part of) their work (especially Max-Planck- and Fraunhofer-Societies), about 1.2 were spent for R&D in countries other than the FRG. The total was by 4.7% higher in 1990 than in 1989.

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\*) most data taken from: "Facts and Figures 1990", publ. by FMRT, Public Relations Division, April 1990, V + 196 pp.

\*\*) American billions (= German milliards)

\*\*\*) this seems to be a good example for the necessity to be very cautious when comparing such figures internationally.

#) Currency unification took place on 01 July 1990; the area of the former GDR was incorporated into the FRG on 03 October 1990.

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More statistical information specific for the FMRT is given above under 4.2.3.

The Federal Government jointly with all or specific Länder Governments are supporting the Deutsche Forschungs Gemeinschaft (DFG, German Research Society, similar to the US NSF), the Max-Planck Society, The Fraunhofer Society; and in 1990: 13 Large Research Centers ("GroßForschungsEinrichtungen", GFE, also translated as "National Research Centers": 90% federal, 10% land); 48 "Blue-List" institutes (50% federal, 50% land); and 102 projects of the Academies of Science (50% federal, 50% land).

Industrial expenditures for R&D exceed government contributions at a ratio of about 60% to 40%. They amount (1987) to about 45 billion DM, an increase by 60% over the status of 1981. At the same time, the percentage of industrial companies which conducted innovations has increased from 67% in 1982 to 76% in 1988. 26 billion DM for R&D were spent by companies with more than 10,000 employees, 11 billion by companies with 1,000 to 10,000 employees, the remainder by small and medium sized companies. 25,000 small and medium-sized companies do their own R&D, a significant increase has taken place in the last ten years.

Relative comparisons of R&D expenditures as percents of the gross domestic product in various countries, and of the shares going to non-defense R&D are given in the following table. These numbers look as if they were exact but the definitions of R, of D, and of "defense R&D" (and other concepts, e.g. "budget") are not the same in all countries.

Country	Total share			of which	civil R&D		
	1975	1987	1988		1975	1987	1988
FRG	1.23	1.10	1.05		1.09	0.96	0.92
France	1.15	1.38	1.37		0.81	0.88	0.85
U.K.	1.40	1.12	1.06		0.77	0.58	0.55
Italy	0.33	0.76	0.82		0.32	0.70	0.74
Netherlands	0.92	0.97	0.95		0.89	0.94	0.92
Japan	0.60	0.62	-		0.58	0.59	-
U.S.	1.20	1.28	1.23		0.59	0.40	0.40
Canada	0.67	0.57	0.57		0.63	0.53	0.53

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4.6.3. Non-university, government supported  
Research Institutes\* in the five new länder and East-Berlin\*\*

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These institutes are classified into five groups depending on their structure and support mechanisms:

GroßForschungseinrichtungen (Large Research Establishments, or National Research Centers). Financed usually 90% by the Federal Government, 10% by Land or Länder. Some of these Establishments have various institutes located in different länder. There were 13 National Research Centers in the old Länder. Four new Centers and seven new institutes of the old centers are in the process of being established in the five new länder and East-Berlin.

"Blaue Liste Institute" (Institutes of the Blue List). Financed generally 50:50 by federal and land government (in the five new länder, the federal government may provide a greater share for an initial phase). There are 48 such institutes in the eleven old länder. About 28 new ones are being established in East-Germany.

Institutes of the Max-Planck Society for the Promotion of the Sciences. In the "old" FRG, there are 33 "Max-Planck-Institutes" (plus one in Italy and one in The Netherlands) and four other Max-Planck groups. For the five new länder and East-Berlin, two new "Max-Planck-Institutes" and 15 "Max-Planck-Arbeitsgruppen" plus one sub-society are scheduled.

Institutions and Branch-Facilities of Institutions of the Fraunhofer Society for the Promotion of Applied Research. 37 Fraunhofer Institutes exist in the eleven old länder. For East-Germany, 12 branch institutions of these 37 institutes, plus 10 independent "Fraunhofer-Einrichtungen" are being established.

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\*) not included are the "Ressort-Forschungs-Einrichtungen", i.e. departmental research institutes directly run by various ministries of the federal government (more than 50 of these in the 11 old länder) and of the various länder governments. Some of these are of significant interest for basic research, e.g., in the five new länder the Observatorium Potsdam of the Weather Service under the Federal Ministry for Transport; or, in the old länder the "Forschungsanstalt der Bundeswehr für Wasserschall und -Geophysik" (FWG) in Kiel under the FMOD; and others.

\*\*) Source: "Kurzdarstellungen der neuen Forschungs-Einrichtungen in den neuen Ländern und Berlin" (Pressedokumentation 03/92). Manuscript edited by Presse-Referat FMRT, Bonn, 10 January 1992.

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#### 4.6.4. Other Institutes in the Five New Länder and East-Berlin

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It seems to be too early to count research institutions maintained or to be maintained by Federal Ministries in the five new länder or in East-Berlin; the same holds for departmental research institutes of the five new länder governments.

Regarding the large changes within the East-German industry and commerce, it is obvious that we cannot yet give any reliable information on research institutes and laboratories within industry etc. Doubtless, there will be some of interest, for example within the new Zeiss establishments at Jena.

There are, in addition, a number of potentially interesting independent institutions and laboratories, mostly small ones, eager to find new solutions. The list of the "Arbeitsgemeinschaft industrieller Forschungseinrichtungen 'Otto von Guericke', e.V." (AIF = Association of industrial research establishments) describes 191 of them in the five new länder and East-Berlin.

## CHAPTER 4.7

### COLLECTIONS OF RESEARCH DONE OR IN PROGRESS

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#### 4.7.1. Introduction

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In the U.S. and in Germany, efforts have been made to collect relatively detailed information on both research results and projects in progress. This information is stored either in libraries or in data banks, accessible accordingly either in the traditional way or by electronic means, for example by calling key words. The data banks are rather comprehensive. It is not possible to give here all details needed for their use. Catalogs, manuals or other user material can be requested from the addresses provided below.

#### 4.7.2. Collection on Research in Germany by Library of Congress.

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The Library of Congress in Washington, DC, is beginning to establish a special collection of information material on research in Germany, covering about the same reports, brochures etc. which are listed in the present REPORT, and to be routinely supplied by the German agencies and organizations from which these reports etc. originate. The material can be investigated in the Library but it is also possible, to a certain degree, to investigate remotely. It will take several months before this collection will have enough material to be useful. Contact:

Dr. John Feulner  
Director, Technical Reports Section  
Science and Technology Division  
Library of Congress  
Washington, DC, 20540  
Telephone: +1 (202) 707-5664  
Telefax: +1 (202) 707-1925.

#### 4.7.3. U.S. National Technical Information Service

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The NTIS is situated in Springfield, Virginia, practically a suburb of Washington, DC. It is a self-supporting agency of the U.S. Department of Commerce and the largest single source for public access to Federally produced information, originally established in 1945. Each year, approximately 70,000 summaries of completed, and 120,000 of ongoing U.S. and foreign government-sponsored research and development and engineering activities are added. Its collection

of 2 million works covers current sciences and technologies, foreign and domestic environment, energy, health, social sciences, business and management studies, trade, general statistics, translations of foreign reports and hundreds of other areas. The material is not limited to printed reports and documents, there are also computer software and data files on tape, diskette and CD-ROM. More than 200 Federal agencies contribute to the collection, including NSF, NASA, EPA, NIH, DOD, the Departments of Agriculture, Energy, Commerce, Interior, Health and Human Services, and Transportation. Nearly one third of new additions now come from foreign sources (including Japan, East-Europe, and Russia). NTIS can deliver the full text of 90% of the 70,000 documents it announces each year. A number of printed and electronic awareness services are available for researchers, educators, managers, and librarians. - An 48-page Catalog of Products and Services is issued every year and can be requested under telephone +1 (703) 487-4650, ask for PR-827.

Address:

National Technical Information Service  
5285 Port Royal Road  
Springfield, VA, 22161  
Telephone: (703) 487-4650  
Telefax: (703) 321-8547  
Telex: 98-9405 or 64617;

German cooperating organization is FIZ Karlsruhe (Frau Ulrike Keil), see below under 4.7.5. NTIS can also be accessed via the database "NTIS" of STN International, see below.

#### 4.7.4. STN International; Columbus, Ohio

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STN offers on-line service and products. It is a non-profit organization, operated in North America by CAS, a division of the American Chemical Society and in Europe by FIZ, Karlsruhe (see below, 4.7.5.). Its "Mid-Year 1991 Database Contents Guide" describes 112 databases in English and/or German and some also in French or Spanish; 39 of these databases are of German origin. Tutorial services to learn the various search possibilities are offered, access can be made from personal computers. The German cooperative organization is FIZ Karlsruhe, see below under 4.7.5. All STN International Databases can equally be accessed at FIZ. Address:

STN International  
c/o Chemical Abstract Service (CAS)  
2540 Olentangy River Road  
P.O. Box 3012  
Columbus, OH, 43210-0012  
Telephone: (614) 447-3698 or (from the US) (800) 848-6533  
Telefax: (614) 447-3713  
Telex: 6842086 CHMAB



4.7.5. FIZ (Fach-Informations-Zentrum), Karlsruhe  
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houses the STN International, Karlsruhe which seems to be very similar to STN International Columbus (see above). Its booklet "STN International, Datenbanken aus Wissenschaft und Technik" describes 117 databases in most cases identical with the ones listed above under 4.7.4. Many of these data bases will be very useful for American scientists wanting to know what is been done in Germany in their own field. For example, "PHYS", produced by FIZ in cooperation with the American Institute of Physics and the Astronomical Math. Institute in Heidelberg, evaluates books, reports, non-conventional sources, conference contributions and 22200 scientific journals to cover eleven branches of physics. Every second week more than 5000 quotations are added. From 1979 through 1992 more than 1½ million quotations have been accumulated. Another database of special interest "FORKAT" which reproduces the information of the "Förderungskatalog" of the Federal Ministry of Research and Technology in Bonn [see above under 4.2.3(e)]. FORKAT is also described as the In-house data base of the FMRT. From 1984 to September 1990 it collected 14,708 research projects, and it is reloaded annually. It does not contain reports of sponsored projects, for these see the data bank FTN, also by STN.

Address: Fach-Informations- Zentrum Karlsruhe  
D/W-7514 Eggenstein-Leopoldshafen 2  
Telephone: +49 (7247) 808-300  
Telefax: +49 (7247) 808-666

4.7.6. Technische Informations Bibliothek Hannover  
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This "Technical Information Library" at the Technical University Hannover offers, among other services, what it calls "TIBQUICK, the quickest way to scientific literature, on-line orders, fax-delivery"- if necessary, within two hours. Supplementing certain electronic data services, it will supply quickly the full text of papers. It was established in 1959 on the basis of the Hannover University Library, founded 1831. Address:

Technische Informationsbibliothek  
Welfengarten 1 B  
D/W-3000 Hannover 1  
Telephone: +49 (511) 762-2268  
Telefax: +49 (511) 715-936  
Telex: 922 168 tibhn d.

MAIN CHAPTER 5  
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AMERICAN/GERMAN EXCHANGE AND COLLABORATION  
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contains:

- 5.1. Introduction
- 5.2. American Agencies and organizations
  - 5.2.1. Introduction
  - 5.2.2. Amer. Assoc. Advancement of Science
  - 5.2.3. National Science Foundation
  - 5.2.4. U.S. Department of State
  - 5.2.5. German Marshall Fund of the United States
  - 5.2.6. Congressional Study Group on Germany
  - 5.2.7. American Council on Germany
  - 5.2.8. Amer. Inst. for Contemporary German Studies
  - 5.2.9. Georgetown University
  - 5.2.10. W. Wilson Internat. Center of Scholars
  - 5.2.11. Institutes of American Universities in Germany
  - 5.2.12. German Language Society
  - 5.2.13. German-American Cultural Fund
  - 5.2.14. Europ. Res. Offices of U.S. Army, Navy, Air Force
- 5.3. Fulbright Program
- 5.4. German Foreign Office and German Parliaments
- 5.5. German Academic Exchange Service ("DAAD")
- 5.6. Humboldt Foundation ("Alexander von Humboldt Stiftung")
- 5.7. Atlantik Brücke
- 5.8. Other German Organizations on GE/US Exchange
  - 5.8.1. Introduction
  - 5.8.2. Konrad-Adenauer Foundation
  - 5.8.3. Friedrich-Ebert Foundation
  - 5.8.4. Friedrich-Naumann Foundation
  - 5.8.5. Hanns-Seidel Foundation
  - 5.8.6. Goethe Institute
  - 5.8.7. German Historical Institute Washington
  - 5.8.8. Other Organizations
- 5.9. Agreements, Common Experiments

## 5.1. INTRODUCTION

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Main Chapter 5 contains the following parts:

In chapter 5.2, American agencies participating in or influencing American/German scientific collaboration, and a selection of American organizations dedicated fully or in part to dealings with Germany are quoted and briefly characterized, with names and addresses.

Chapter 5.3. describes shortly the Fulbright organization which is an international one, consisting legally of bi-lateral commissions and special organizational parts in the USA, and is playing a very important part in international scientific exchange.

Chapter 5.4. discusses mainly the special office within the German Foreign Ministry dedicated to certain types of German/American coordination. Some of the products of this office give valuable information for any type of American/German cooperation.

Chapters 5.5 and 5.6. inform on two German organizations which are dedicated to international academic exchange in which the German/American one plays an important role.

Chapter 5.7. describes a German organization which is very instrumental in promoting German/American understanding.

In Chapter 5.8., we list German organizations the purpose of which is not scientific or research relationships between Germany and America but which are still of interest in this context and also are interested in it.

Chapter 5.9. informs briefly on possibilities for and difficulties of more legal forms of research collaboration, from NATO groups through "Memoranda of Understanding" and Data-Exchange Agreements.

## 5.2. AMERICAN AGENCIES AND ORGANIZATIONS

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### 5.2.1. Introduction

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It is here not the place to list and describe the large variety of government-related or private agencies or organizations - including American representations of analog German organizations - which offer assistance for scientific and other coordination or collaboration in and with foreign countries or especially Germany. Large scientific Unions or Societies often have foreign secretaries, often senior scientists, with extended foreign experience and interest. In the following sections, we provide a small selection. Many more institutions of this kind are listed in the books quoted above in chapter 3.3, especially in (3) and (4).

### 5.2.2. The American Association for the Advancement of Science, AAAS -

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has a Directorate for International Programs; among whose programs are the following: Global Change Program, International Scientific Cooperation Program, Program on Science and International Security, and others. For more information write or call:

Richard W. Getzinger, Director  
Directorate for International Programs  
AAAS  
1333 H Street, NW  
Washington, DC, 20005  
Telephone: +1 (202) 326-6650  
Telefax: +1 (202) 289-4958.

This Directorate, together with the Alexander-von-Humboldt-Stiftung of Germany (see below), conducted a "Seminar on Bilateral Cooperation in Science and Technology between the United States of America and the Federal Republic of Germany" from 9 through 11 September 1991 in East-Berlin. This seminar had been preceded by a similar one held in Washington DC in 1987. In Berlin, three groups of topics were discussed: Contacts between individual scholars, scientists and engineers; Joint research projects; and Joint studies on policy issues and problems. The participants also suggested that leaders of the U.S. and German scientific and engineering communities consider establishing a regular forum in which to facilitate cooperation between the two countries (for this idea, see also 5.2).

### 5.2.3. The National Science Foundation, NSF

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has a "Directorate for Scientific and Technological and International Affairs" including a "Division of International

Programs". In October 1991, this Division issued a small brochure with the title "Western European Program Announcement" (NSF 91-3, 9 pages). It contains information on proposal for (1) Cooperative Research Projects (i.e. with European scientists or institutions); (2) Joint Seminars and Workshops, and (3) State of the Art Surveys. Only American investigators are supported, but indications are made where their European counterparts could apply for their own support nationally.

For some countries, special notes are added. For Germany, they read as follows:

"GERMANY. No counterpart proposal submission is required at this time. German scientists may wish to inquire about financial support from the International Relations Division of the Deutsche Forschungsgemeinschaft (DFG) at Kennedyallee 40 (or Postfach 20 50 04), D-5300 Bonn 2. Applicants interested in submitting proposals for collaboration with the Gesellschaft für Mathematik und Datenverarbeitung (GMD) should contact the U.S.-Germany Program Officer for further information. Their German counterpart should contact the International Department of the GMD, Schloss Birlinghofen, Postfach 1240, St. Augustin 1\*.

NB: Cooperation with scientists affiliated with institutions located in the former German Democratic Republic is now handled under this program."

Americans interested are advised to ask for a copy of this Western European Program Announcement from

U.S.-Germany Program Officer  
Division of International Programs  
National Science Foundation  
Washington, DC 20550  
Telephone: (202) 653-5437

5.2.4. Within the U.S. Department of State,

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the Assistant Secretary of the Bureau of Oceans and International, Environmental and Scientific Affairs, E. U. Curtis Bohlen, telephone +1 (202) 647-1554 would be the correct address in matters of international scientific cooperation involving the State Department.

5.2.5. The German Marshall Fund of the United States

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is an American organization supported by grants given by the German Bundestag, founded in 1972 in recognition of post war Marshall Plan - aid. Its purpose is to promote a more informed understanding of

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\*) Zip Code (Postleitzahl): D/W-5205 St. Augustin 1

differences that arise between Europe and the United States, and to stimulate exchange of practical experience on common problems confronting modern industrial societies. The address of its headquarters is

The German Marshall Fund of the United States  
11 Dupont Circle, NW  
Washington, DC 20036  
Telephone: (202) 745-3950  
Telefax: (202) 265-1662  
Telex: 197533 GMF US

Its president is Frank E. Loy, the Director of Programs Peter R. Weitz. Twenty American personalities constitute its Board of Trustees. The Representative for Europe is David Kramer with the address

The German Marshall Fund of the United States  
Kaiser Straße 1c  
D/W-5300 Bonn 1  
Telephone: +49 (228) 21-0041  
Telefax: +49 (228) 22-9698  
Telex: 1722 83637

The Acting Director of the Berlin Office is Peggy Knudson,  
The German Marshall Fund of the United States  
Clara Zetkin Straße 112  
D/O-1080 Berlin  
Telephone: +49 (30) 391-6201  
Telefax: +49 (30) 391-6433

The scope of activities is very broad, many of them carried out in cooperation with other institutes or organizations, and not restricted to German/American relations. The current program areas are listed as follows: (1) Exploring changing US-European economic roles; (2) Supporting reform in central and Eastern Europe; (3) Building American-European environmental partnerships; (4) Fostering US-European cooperation after the Cold War; the annual budget for each of these four programs is several million dollars. The broad fellowship program for Germans (also from the East, including two special programs only for them) and Americans is centered on political, social, and economic issues; scientific research is not included. A publication with the title "Transatlantic Perspectives", had issued its number 25 in spring 1992.

#### 5.2.6. The Congressional Study Group on Germany

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consists of about 80 "members" and more than 10 "associate members" all Members of the House of Representatives, and about 20 "members" and more than 10 "associate members" of the U.S. Senate, all Senators. The German Ambassador to the US, Jürgen Ruhfus, defined

this Group as the "crown jewel of German-U.S. relations and the cornerstone of the German-U.S. legislative relationship". It was initiated in 1987/1989 (House/Senate, resp.) with the goal to develop closer ties between the German Bundestag and the U.S. Congress. More than 100 meetings or seminars have taken place so far and a comparative study of about 600 pages on Congress and Bundestag has been published in German and English. German Bundestag-Members visit with an American Congressman his congressional district, the Capitol has a hospitality program for distinguished German visitors - these activities and others constitute the ongoing program. - The address is:

The Congressional Study Group on Germany  
Suite 422  
1755 Massachusetts Avenue NW  
Washington, DC 20036  
Telephone: (202) 332-3532;

the Executive Director is Jed Johnson, jr.

A sister group in Germany is the Deutsch-Amerikanische Parlamentariergruppe of the Bundestag, see below under 5.4.

#### 5.2.7. The American Council on Germany

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is a private, non-profit organization dedicated to the promotion of economic, political and cultural ties between the United States and German citizens and institutions. Exchange of young professionals, conferences, study tours, sponsored speakers and publications are among the means toward that goal. U.S. Senator Charles McC.Mathias, Jr. is the Chairman, the Board of Directors has about 20 representatives of American universities, banks, law firms, and industry. It was founded shortly after World War II with John J. McCloy, General Lucius D. Clay, and Eric Warburg as some of its founding members. A fellowship fund, biennial conferences, young leaders conferences, lectures and receptions etc. with prominent German and American guests are among their many regular programs; a biannual newsletter "Transatlantic Dialogue" is one of their series of publications. The ACG has about 400 members, it is supported by private contributions, the bulk of which is coming from American and German industrial companies. The address is:

American Council on Germany  
14 East 60th Street  
New York, NY 10022  
Telephone: (212) 826--3636  
Telefax: (212) 758-3445;

its president is Carroll Brown.

To quote two recent opinions on the ACG: Bundespräsident Richard von Weizsäcker: "You have distinguished yourself by furthering the fundamental values and convictions we hold in common, thereby also

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creating the essential prerequisites for German unification" and President George Bush: "The work of the ACG has not ended, it has merely entered a new era."

#### 5.2.8. The American Institute for Contemporary German Studies

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(AICGS) of the Johns-Hopkins University is one of several Washington-Area university institutes which not only offer studies about Germany but also frequently present lectures and discussions to a wider audience, often with prominent visitors from Germany. The AICGS began its work in 1984. Its programs are supported by many of the American and German Foundations (among them the ones listed in this REPORT in chapters 4.5 and 5.3 through 5.8). Fellowship programs for German and American scholars; lectures, seminars, conferences and colloquia (over 250 of them already); an "Academic Advisory Council" composed of leading German and American scholars and experts on Germany; an "AICGS Corporate Associates Program" for the corporate and individual supporters of this institute; the "Mars Distinguished Speaker Series"; and the publishing of monographs and results of Institute-sponsored conferences are among the Institute's activities. A kind of newsletter, AICGS-NEWS, issued no.1 of vol.4 in the fall of 1991 (4 pages). During the next few years, the Institute's activities will concentrate on the following topics: Germany and the European Community; Constitutional and political systems in Germany; Economic aspects of German unification; U.S. relations with a united Germany; Germany's role in international security systems; Integration problems of East- and West-Germany; German historical consciousness; German literature and culture in a social and political context. The address of AICGS is:

American Institute of Contemporary German Studies  
The Johns Hopkins University  
Suite 350  
11 Dupont Circle  
Washington, DC 20036-1207  
Telephone: (202) 332-9312  
Telefax: (202) 265-9531  
Telex: 264 170 JHU;

its Director is Robert Gerald Livingston.

#### 5.2.9. Center for German and European Studies, Georgetown University -

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This Center, related to the German Department of Georgetown University, conducts a series of open lectures about German and European contemporary topics, often given by visiting prominent personalities. They are chaired by Prof. Kurt Jankowski. The address is:



Center for German and European Studies  
501 ICC  
Georgetown University  
Washington, DC 20057  
Telephone: (202) 687-5602  
Telefax: (202) 687-8359

10. The Woodrow Wilson International Center of Scholars  
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was established 1968 by the U.S. Congress as an international center for advanced study, "symbolizing and strengthening the fruitful relation between the world of learning and the world of public affairs". Chosen in annual worldwide competitions, some 50 Fellows at the Center carry out advanced research, write books and join in discussions with other scholars, public officials, journalists, and business and labor leaders. Financing comes from both private sources and annual congressional appropriation. The average yearly stipend is approximately \$38,000.00; travel expenses for Fellows, spouses and dependent children are provided. In no case can the stipend exceed \$52,000. Application deadline in October. Addresses:

Woodrow Wilson International Center for Scholars  
Suite 704

901, D-Street SW  
Washington, DC 20024  
Telephone: (202) 287-3000  
for application materials:  
Fellowship Office  
Woodrow Wilson Center  
Washington, DC 20560

The Director of the Center is Charles Blitzer. The Center publishes The Wilson Center Quarterly, a high level journal dealing with important temporary issues, and other material, including books by its Fellows. The Fellows are given an office in the Smithsonian Castle on the Washington Mall, access to the Library of Congress, computers and manuscript typing services, and research assistants.

5.2.11. Institutes of American Universities in Germany  
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This chapter just reminds us of the various institutes which have been set up - some already a long time ago - by American universities in Germany. To quote just one example:

The University of Maryland University College  
Postfach 2023

D/W-7070 Schwäbisch Gmünd  
Telephone: +49 (6221) 3780  
Telefax: +49 (6221) 378-300,

or, in the U.S.:

The University of Maryland University College  
International Programs  
University Boulevard at Adelphi Road  
College Park, MD 20742-1644  
Telephone: (301) 985-7442  
Telefax: (301) 985-7678

Bachelor's Degrees can be earned in four disciplines, the institute also offers possibilities for a "Junior Year Abroad" with special-topics courses. The student body is international.

For information on other such colleges or institutes of American universities in Germany, contact the Institute of International Education, see below under 5.2.15.

#### 5.2.12. The German Language Society

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in the area of Washington, DC, is holding regular lectures and discussions by and with prominent visitors from Germany, Austria and Switzerland, usually in one of the three embassies. Its address is:

German Language Society  
Post Office Box 4811  
Washington, DC 20008-0011

#### 5.2.13. The German-American Cultural Fund

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conducts one or two relatively large German events (e.g. exhibitions of art) and also presents the Carl-Schurz-Lecture series in the Library of Congress. Address:

German-American Cultural Fund  
1 Farragut Square NW  
Washington, DC 20006  
Telephone: (202) 347-0247

#### 5.2.14. European Offices of American Government Agencies Promoting Scientific Research

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The U.S. National Science Foundation, the U.S. Army, U.S. Navy and U.S. Air Force maintain offices in Europe to promote international coordination or collaboration. In the cases of Army and Air Force, these offices have the possibility to give grants for scientific research to European scientists and scientific institutes; the Navy office has some possibility to assist with visits to America or to conduct small conferences on a high scientific level - all work to provide information on European science to Americans and vice versa.

These offices have the following addresses:

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National Science Foundation/Europe

c/o Embassy of the United States

2, avenue Gabriel

F-75382 Paris CEDEX 08

Telephone: +33 (14) 261-8075, ext. 2760

Telefax: +33 (14) 266-9783

address from the U.S.: APO New York 09777

U.S. Army Research, Development and Standardization

Group United Kingdom (USARDSG UK)

223-231 Old Marylebone Road

London NW1 5TH

Telephone: +44 (71) 409-4423...

Telefax: +44 (71) 724-1433

address from the U.S.: PSC 802, Box 15; FPO AE 09499-1500

Office of Naval Research European Office (ONR Europe)

223-231 Old Marylebone Road

London NW1 5TH

Telephone: +44 (71) 409-4508

Telefax: +44 (71) 724-7030

address from the U.S.: PSC 802, Box 39; FPO AE 09499-0700

U.S. Air Force European Office of Aerospace Research and Development  
(USAF EOARD)

223-231 Old Marylebone Road

London NW1 5TH

Telephone: +44 (71) 409-4478

Telefax: +44 (71) 402-9618

address form the U.S.: PSC 802, Box 14, FPO AE 09499-0200

5.2.15. The Institute of International Education

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This institute was already internationally known long before World War II. It is interested in international education on all levels. The U.S. Department of State and the Board of Foreign Scholarships designated it to administer grants for study abroad, college-level teaching fellowships, and assistanceships. It offers, furthermore, exchanges, training and intern programs, research support, and homestay programs. The grants are for long and short durations.  
Addresses:

Institute of International Education

809 United Nations Plaza

1400 K Street, NW, Suite 650

New York, NY 10017

Washington, DC 20005

Telephone:

(212) 883-8200

(202) 898-0600

### 5.3. FULBRIGHT PROGRAM

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The Fulbright Program is funded and administered by the U.S. Information Agency. Funding is also provided by participating governments and cost sharing by host institutions in the U.S. and many countries. The presidentially-appointed J. William Fulbright Scholarship Board (Chairman: Charles W. Dunn) is responsible for providing policy guidance for the program and making the final selection of all grantees.

The support by the UDS Government, in 1970 constant dollars, increased from 1950 (M\$24) to 1965 (M\$35), decreased to 1975 (M\$13) and increased since to 1990 (M\$28 in constant dollars; M\$90 in the annual appropriation).

Two-way exchanges occur with all countries in the world. About 1000 scholars are involved every year in each direction (coming to the US and going abroad), with Europe being the main exchange partner. Most American scholars going to Europe go to Germany, most Europeans coming to America come from Spain, UK, France, Belgium, The Netherlands, with Germany in the sixth position (1990/91). Americans going to Western Europe do this mostly for less than 6 months, while in the opposite direction more than 6 months is nearly the rule. More than 500 American Universities and other research institutions receive visitors, each having between about 60 (UCB) and one Fulbright scholar for a time. More than 100 Advisory Committees exist in the United States, some for target areas (geographic and other), some for scientific disciplines.

In the United States, the Fulbright Program is operated by a private organization, the

Council for International Exchange of Scholars (CIES)  
Suite 5-M

3007 Tilden Street, NW  
Washington, DC 20008-3009  
Telephone: (202) 686-4000.

Another involved address:

Fulbright Alumni Association  
1307 New Hampshire Avenue, NW  
Washington, DC 20036  
Telephone: (202) 331-1590  
Telefax: (202) 331-1979

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The German Commission:

German Fulbright Commission  
Dr. Ulrich Littmann  
Theaterplatz 1a  
D/W-5300 Bonn 2  
Telephone: +49 (228) 351-725

The Fulbright Program produces annually voluminous reports of various kinds with a wide variety of interesting information and statistics, including mailing lists of present and former recipients etc. There are many national, regional or local groups related to the Program in various ways.

5.4.GERMAN FOREIGN OFFICE, BUNDESTAG AND LÄNDERPARLIAMENTS  
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The "Auswärtiges Amt" (Foreign Office, Ministry of Foreign Affairs) of the German Federal Government, has created a special office concerned with a narrowly defined but still rather broad official task within the relations between the United States and Germany. The position of the head of this office is: "Koordinator für die deutsch-amerikanische zwischengesellschaftliche, kultur- und informationspolitische Zusammenarbeit", the approximate translation of which is: "Coordinator for the German-American collaboration in the fields of relations between the two national communities; the field of the politics in the domain of arts, music and other cultural activities; and in the field of politics of mutual information." The office is headed by Prof. Dr. Werner Weidenfeld who, in part because of this position, is well known in Germany; one of his co-workers is Herr Koch. The address is:

Auswärtiges Amt, Referat 204-K  
Postfach 1148  
Adenauer Allee 99-103  
D/W-5300 Bonn 1  
Telephone: +49 (228) 17-2661, -2870, -2809

The closest partner on the American side is the "Interagency Steering Committee on U.S./German Contacts" (USIA, Washington, see above under 5.2.14).

Among the many activities of this office, we mention the following:

(1) A publication: "Adressbuch der deutsch-amerikanischen Zusammenarbeit" (List of addresses of interest to German-American Cooperation). Auswärtiges Amt (Foreign Office), Referat Öffentlichkeitsarbeit, 3. Edition 1988 (159 p, 14.5 x 21 cm).

Main chapters:

Allgemein (general), 18 p  
Wirtschaft (industry, commerce), 7 p  
Kultur, Bildung, Wissenschaft (arts, humanities,  
science), 41 p  
Austausch, Begegnung, Partnerschaften (exchange,  
meetings, partnerships), 33 p

and an appendix with:

Information booklets, 4 p  
Private organizations, 24 p  
Town partnerships etc., 1 p  
University partnerships, 17 p  
subject index, 13 p

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This list of addresses has almost 300 numbers of individual institutions (or of institute-groups which often contain the addresses of many individual branches, sometimes more than 50). A very brief description of the purpose is often added. Obviously, for anybody interested in American/German relations, this is a most valuable book.

(2) A publication: Weidenfeld, Werner, 1989: "Freundschaft als Zukunftsgut" (Friendship as an asset for the future). Auswärtiges Amt (Foreign Office), Referat für Öffentlichkeitsarbeit (115 p, 15 x 21 cm).

This booklet gives on 34 pages the annual report of the Coordinator for German-American Collaboration, and on 80 pages documents including speeches of the Federal Chancellor Helmut Kohl and many other declarations and speeches by German and American politicians, history professors and others; among them also a fundamental contribution by Prof. Weidenfeld.

(3) A specific effort, in Germany best known under the name of a plan for an "American-German Academy of Sciences", which includes the plan for the establishment of a

German/American Program for Common Research Projects  
Between Universities of Both Countries.

The plan for the Academy was discussed between President Bush and Chancellor Kohl at their meeting in the spring of 1992, and a special conference was conducted in Washington on 29 May with the Federal Minister for Research and Technology, and the Science Advisor for the President participating. Another meeting is planned for 30 September in Germany. - This plan had been carefully prepared in Germany during the last years, and several meetings of Chancellor Kohl with the Presidents of leading American universities (whom he had invited to come to Bonn) helped in these preparations. The plan is considered with urgency because the departure of a generation of German scholars who after World War II had a very large need for cooperation with American science. With their retirement, valuable ties are in danger to be lost; the planned new high-level institution may help to compensate. The institution will probably be on a private level on the American side while on the German side there may be a mixture of government and private representatives.

The German Parliament, lower house ("Deutscher Bundestag") has constituted a "Deutsch-Amerikanische Parlamentariergruppe" which has as its American partner the Congressional Study Group on Germany, see above under 5.2.6. Address:

Bundeshaus, Referat PB 3  
D/W-5300 Bonn 1  
Telephone: +49 (228) 16-2517

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There is also a special organization of delegates in the parliaments (Landtage) of the German länder (and some other members), promoting meetings and exchange with delegates of the houses and/or senates of the American States:

Partnerschaft der Parlamente  
(Parliaments' Partnership)  
John F. Kennedy Platz  
Rathaus Schöneberg  
D/W-1000 Berlin 62  
Telephone: +49 (30) 783-3391



#### 5.5. GERMAN ACADEMIC EXCHANGE SERVICE (DAAD)

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The Deutscher Akademischer Austauschdienst (DAAD) was founded during the Weimar Republic in 1925 and refounded for West-Germany after World War II. It has developed into one of the leading forces in cultural exchange between Germany and other countries and may now be the largest organization of this kind anywhere. Its activities have multiplied and broadened over the years, and again so in this transition time of the re-unification of Germany. Frequently in Germany, when new international cultural programs are conceived, the DAAD is asked to implement them.

The DAAD is an institution of the German universities and other colleges and schools of higher learning, legally a licensed non-profit organization. Its members are - at present - 196 universities etc. plus 121 "Studentenschaften", i.e. legal representations of all the students of a university etc. These numbers include 28 Universities etc. and 14 "Studentenschaften" from the five new länder and East-Berlin. There is a advisory board ("Kuratorium") in which the Federal Government and the Länder Governments are represented as well as scientific agencies and organizations (among these the Hochschul-Rektoren-Konferenz, see 4.3.2; the Kultusminister-Konferenz, see 4.3.1; the universities themselves etc.). The budget for the promotion of foreign experience of Germans are about 130 million deutschmarks, for German experiences of foreigners runs at 170 million deutschmarks per year. In 1991, more than 13,000 foreign students and almost 5,000 foreign professors, scientists, artists or administrators were supported; while the numbers for Germans amounted to 18,000 students and more than 3,000 professors etc\*. These efforts were performed in almost twenty different programs, among which there is one special program organized by the European Community. - When considering the above numbers and expenses for "professors etc.", it is important to remember that there is also another program in existence: the Alexander-von-Humboldt-Stiftung (see below under 5.6).

Within Germany, the tasks of the DAAD at the individual universities etc., are usually represented by the Academic Foreign Offices (Akademische Auslandsämter) which are, however, organizations of the universities or other bodies, not of the DAAD itself. Outside of

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\*) The author of this report was already actively working for the DAAD in the last years of the Weimar Republic and maintained contacts since 1950 and therefore feels entitled to state that in spite of these large numbers there is nowhere the feeling of a mass organization. Quite to the contrary, it is impressive how personal all relations use to be between the DAAD and the people it cares for.

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Germany, the DAAD maintains offices in Jakarta, Cairo, London, Nairobi, New Delhi, New York, Paris, Rio de Janeiro, San José (Mexico), Tokyo. Every year, reports from these offices constitute an interesting part of the Annual Report of the DAAD: the directors of these offices analyze the educational and scientific situation in the respective countries; by necessity, this also involves political analyses\*. The Annual Reports also give detailed information on the distribution of the activities to various programs and to various countries or continents. These distributions are extremely varied. For example, among the about 4,500 foreign students invited for one year to study in Germany, 246 came from North America, predominantly from the fields of the humanities, while there were 653 from Latin America; among them the sciences and mathematics represent the largest group. In the opposite direction, 355 German students went to North America again with the humanities being the center of interest, while only 52 went to Latin America with the sciences as the leading group. - In addition to the foreign students which were invited by Germany (in collaboration with the national organizations in the various countries), there are groups of students supported by their domestic government but still cared for by the DAAD. Among them, the largest group comes from Tunisia and they are all studying engineering; the second largest group, from China, are divided into half sciences and half engineering with a few others. There is, however, a potential difference in the significance of these numbers. While the approximate percentage of distributions among the invited students (in both directions) may be indicative of the real present interest, we cannot come to the same conclusion with regard to the numbers of students supported by their own governments. There are probably many more students, being sent to Germany (and other countries) by their home government but not belonging to the groups under the auspices of the DAAD.

The address of the DAAD main office is:

Deutscher Akademischer Austauschdienst

Kennedy Allee 50

D/W-5300 Bonn 2

Telephone: +49 (228) 882-0

Telefax: +49 (228) 882-444

Telex: 8-85515 daad d.

It's President is Prof. Dr. Theodor Berchem, the Secretary General Dr. Christian Bode.

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\*) These are critical analyses which are, of course, colored by the personal opinions and convictions of their authors. That makes them especially interesting. We also want to keep in mind that these reports may influence to a not-insignificant degree future policies in Germany with regard to the respective country.

There are also two DAAD offices in Berlin.

The New York office is led by Dr. Wedigo de Vivanco with the following address:

German Academic Exchange Service  
19th floor  
950 Third Avenue  
New York, NY, 10022  
Telephone: (212) 758-3223  
Telefax: (212) 755-5780.

Among the many series of publications by the DAAD, a monthly journal "Letter, Hochschule und Ausland" serves, a.o., to keep alive ties to former exchange students etc. (for that purpose, there is also a special association). The series "Studienführer" dedicated always to one particular country, provides the initial information for students considering a study abroad. The one for the US (fifth edition 1984, written by Ulrich Littmann\*) is more than 100 pages long and begins with a general description of the American university "landscape", based on the fundamentals of the American philosophical-political edifice. It is expressly written by an "intentionally critical European" who, however, after a while, finds out that there are some fundamental premises unknown to the Europeans.

In all matters of scientific collaboration, the DAAD and, at the individual university the Akademische Auslandsamt, will be a valuable source of information and assistance. The Akademisches Auslandsamt at each university is in charge of advising and helping the students, professors, and administration in all international relations, including the welcoming and supporting of foreign students and assisting German students who consider studying abroad. There is not enough room here to list all these Akademische Auslandsämter, but if the university itself is used as an address, the letter will be forwarded.

The following publications of the DAAD will be of interest:

"Förderungsmöglichkeiten für deutsche und ausländische Hochschulangehörige, ein Leitfaden" (Guide on possibilities for support for German and foreign university teachers and students). The fourth edition was issued in September 1991, it has 136 pages. This book lists 14 agencies and organizations which support German and/or foreign students and university teachers for studies, academic work or teaching in Germany or in other countries. It directs itself

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\*) The present chairman of the German Fulbright Commission.

at various forms of supported learning, teaching, or research, including stipends or other support for up to one year, or longer, or renewable; travels to attend conferences or to give lectures, practical work, language learning etc. Two tables address students, graduate students, Post-Doctorates, professors, teachers - one for Germans in foreign countries, the other for foreigners in Germany. These tables list the 41 agencies and organizations and indicate which one pertains to whom. Each agency and organization is briefly described, including information on conditions for support.

The series "Studying in Germany" or "studium in Deutschland" includes two English-language versions, one on the higher education (esp. universities and technical universities, including music and the arts), the other one on "Fach-Hochschulen" (about professional colleges on near-university level).

The "Studienführer" on the United States discusses, as already mentioned, differences between Germany and the U.S. in an interesting way.

#### 5.6. HUMBOLDT FOUNDATION

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The Alexander-von-Humboldt-Stiftung was founded in Berlin in the year 1860, at that time under a joint administration with the Prussian Academy of Sciences. Its purpose was to promote trips of German scientists to other countries (true to the example of the name-giver). It was refounded in 1925 with an almost opposite purpose: to promote visits by foreign scholars and students to Germany. After WW II, it was again refounded in 1953 by the Federal Minister for Foreign Affairs as an incorporated foundation in private law. Its presidents since then have been Werner Heisenberg, Feodor Lynen, Wolfgang Paul and Reimar Lüst. The latter was formerly president of the Max-Planck-Society and Director-General of the European Space Agency. The Secretary General of the Humboldt-Foundation is Dr. Heinrich Pfeiffer. The address of the headquarters is

Alexander-von-Humboldt-Stiftung (AvH)  
Jean-Paul Straße 12  
D/W-5300 Bonn 2  
Telephone: +49 (228) 833-0  
Telefax: +49 (228) 833-199  
Telex: 885 627

According to its statutes, the purpose of the Humboldt-Foundation is:

"...to grant research fellowships and research awards to academically trained and highly qualified persons of foreign nationality...to enable them to carry out research projects in the Federal Republic of Germany, and to maintain the resultant academic contacts..."

From 1953 to 1988, almost 11,000 scientists holding doctorates and being younger than 40 years came to Germany (including West-Berlin) through the Foundation in order to carry out research projects with durations from 1 to 2 years (each year about 500). Among these, more than 1,200 came from the U.S., with Japan in the lead (1,400) and followed by India (860) and Poland (760). From China there were about 250; from the USSR, if any, less than 100. The monthly allowances range from 2,700 to 3,500 deutschmarks, increases for spouses and children and other fringe benefits are additional. The grant is given for one year, it can be extended to the end of the research project but only up to 24 months. If necessary for the project, 4 to 6 months each year can be spent in another European country (except the homeland of the grantee). About 2,000 applications are received each year; the selection is done by special committees composed of 100 eminent German university professors from all disciplines.

In addition to these programs assisting young foreign scientists, the Humboldt-Foundation also provides the Humboldt-Research-Awards for older, outstanding scientists, and the Feodor-Lynen-Research Stipends for highly qualified, young German scientists.

Regular publications are the "Mitteilungen" (twice a year, 1700 circulation), the Annual Reports in German and English, and the Bibliographica Humboldtiana which registers the publications of results from research projects carried out by Humboldt scholars in Germany (so far more than 22,000 plus more than 2,400 translations into 30 foreign languages). - An interesting publication, called "Spurensuche" by Kurt-Jürgen Maaß, discusses an in-depth evaluation of the results of this kind of international exchange of scientists (in German, 1988, 88pp)\*. - Another publication, in English, is "Trends in Mobility of Scientists and Engineers between the Federal Republic of Germany and the United States of America" (by Rolf Hoffmann, 1988, 44 pp).

The annual budget is about 60 million deutschmarks, 90% of which provided by the Federal Government.

The "Humboldt-Foundation North-American Office Washington" is led by Dr. Ian Kettler, and has the address:

Suite 903, 1350 Connecticut Avenue NW  
Washington DC 20036  
Telephone: (202) 296-2990, -2991  
Telefax: (202) 833-8514

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\*) the book includes a diagram on all Humboldt recipients classified according to country of origin and scientific discipline. This diagram provides a partial insight into the distribution of perceptions of international science in various countries and of assumptions of interest in countries other than one's own.

5.7. ATLANTIK BRÜCKE, e.V.  
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The Atlantik-Brücke (Atlantic Bridge), organized and incorporated as a private, independent, non-partisan and non-profit association, was founded in Hamburg in 1952. Members and sponsors come from business, politics, the sciences, the media and trade unions. Membership is by nomination and invitation only. The association is financed by members' contributions.

The Atlantik-Brücke seeks to strengthen both the understanding of Germany in the United States and Canada, and of the United States and Canada in Germany. In particular, it promotes and arranges personal meetings between Germans and Americans in economic, political, and cultural centers of both countries. In addition, the association conducts informal and publishing activities and cooperates with persons and institutions engaged in similar efforts.

Among the American organizations cooperating with the Atlantik-Brücke are the American Council on Germany, Inc. (New York), the Council on Foreign Relations (New York), The Woodrow-Wilson International Center for Scholars (Washington, DC), The American Assembly (New York), the American Jewish Committee (New York), and the Armonk Institute for the Promotion of German-American/Jewish Relations (New York).

Two of its recent publications (together with the FRANKFURTER ALLGEMEINE ZEITUNG, INFORMATION SERVICES) provide material of interest for an American dealing with persons and institutions in Germany: "MEET UNITED GERMANY", one volume entitled "PERSPECTIVES" and the second one "HANDBOOK 1991/1992". These books are described in some detail below under chapter 8.1. They are private publications reflecting the personal opinions of the editors and of the various authors selected by the editors; these opinions are always helpful for the foreigner trying to understand but they do not claim to be expressions of a common consensus. - Since several decades, another publication of the Atlantik-Brücke has provided many useful hints for Americans dealing with Germans: "THESE STRANGE GERMAN HABITS", see also below under 8.1.

Chairman of the Atlantik-Brücke is Walther Liesler Kiep, the Executive Vice Chairman and Program Director is Dr. Beate Lindemann. The address of the headquarters is:

Atlantik-Brücke e.V.  
Adenauerallee 131  
D/W-5300 Bonn 1  
Telephone: +49 (0228) 21-41-60 and 21-42-60  
Telefax: +49 (0228) 26-75-173

## CHAPTER 5.8

### OTHER ORGANIZATIONS

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#### 5.8.1: Introduction

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In this chapter, those organizations based in Germany will be briefly described which are not mainly dedicated to scientific international exchange but which may still be of interest when scientific collaboration with German institutions is intended. With the first four foundations ("Political Foundations") one cannot escape the impression that they have at least philosophical ties with German political Parties because, to a certain extent, their names seem to reflect a political program. In spite of this, it must be pointed out that these political foundations are financially and legally independent and not tied to the Parties. The German Constitutional Court expressly stated, a few years ago, that they have special obligations and programs apart from those of the Parties. They represent a uniquely German form of organization, dealing with fundamental politics and thereby constituting an element of stability (a relationship which as a political fact was stated for the first time by George Mason in 1776, article 15 of the Virginia Bill of Rights). In doing this, they promote fundamental political research (in part in special institutes within the foundation) and thereby also basic political education. International collaboration, including exchange of parliamentarians, politicians, journalists and scientists, is an important part of their programs, with much emphasis on collaboration with Third World countries. All four also maintain permanent representations in Washington, DC and in other countries.

Aside from these four political foundations, all the other organizations of this list intend and manage to avoid involvement in the party-politics in Germany. They, too, have representations in the USA or maintain close relationships with American organizations.

#### 5.8.2: Konrad-Adenauer Stiftung e.V. (Konrad-Adenauer Foundation)

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Konrad Adenauer (1876-1967) was from 1949 to 1963 the first Chancellor of the Federal Republic of Germany. In the Weimar Republic he had been Lord-Mayor of Köln (Cologne). After World War II, he was among the founders and also the first chairman of the Christian-Democratic Union (which is a political party). It was Adenauer who steered the FRG into its incorporation in the Western World.

The foundation was established in 1964 on the basis of smaller predecessors. Its central address is:



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Konrad Adenauer Stiftung  
Rathausallee 12  
Postfach 1260  
D/W-5205 Sankt Augustin 1 (near Bonn)  
Telephone: +49 (2241) 246-0

Chairman of the Foundation is Dr. Bernhard Vogel; the General Manager is Dr. Lothar Kraft.

The American address:

Konrad Adenauer Foundation, Washington Research Office  
Suite 104  
1330 New Hampshire Avenue, NW  
Washington, DC 20036  
Telephone: (202) 296-9137

The annual budget of the Konrad-Adenauer-Foundation is about 200 million deutschmarks.

Seven different institutes with a combined staff of some 400 employees coordinate and implement the following projects: The International Institute, the Research Institute, the Institute for Local Government, the Archives for Christian-Democratic Policy, the Political Academy, the Institute for the Sponsorship of Talented Students, and the Institute for Political Education. - The Research Institute (chairman Dr. Hans-Joachim Veen) investigates the scientific bases which are underlying the political actions, nationally and internationally. In particular, attempts to fill gaps within the political and socio-political research experience; scientific analysis of present political problems; and early recognition of future developments, are main fields of interest, again nationally and internationally. Analyses comparing political institutions (parties, trade unions, etc.) in the various countries of Europe are one essential tool. Another one is the analytical investigation of foreign policy and security issues.

. - Among their numerous publications, the Foundation issues "Occasional Papers" in English (between 10 and 20 per year; dedicated to specific problems), and a periodical called "German Comments, Review of Politics and Culture" (issue #26 was in April 1992, 96 pp). Three series of hardcover books in German are published: "Studien zur Politik" (Studies on Politics); "Beiträge und Untersuchungen zur Zeitgeschichte" (Contributions on and Investigations of Contemporary History); "Forschungs-Berichte" (Research Reports). - The Foundation conducts many varied programs including international conferences and continuing research efforts within the fields of interest indicated above.

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### 5.8.3. Friedrich-Ebert Stiftung

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Friedrich Ebert (1871-1925) was the first Reichspräsident of Germany after the foundation of the republic (often called the "Weimar Republic", 1918-1933), and the chairman of the Social Democratic Party of Germany. - The Foundation was established in Berlin in 1925, dissolved 1933, re-established 1946. Its address is:

Friedrich-Ebert Stiftung  
Godesberger Allee 149  
D/W-5300 Bonn 2  
Telephone: +49 (228) 883-1

Chairman of the Board of Directors is Holger Börner; General Manager Dr. Jürgen Burckhardt.

Washington address: Friedrich-Ebert Foundation  
805, 15th Street NW  
Washington, DC 20005  
Telephone: (202) 331-1819

It has also an office in New York.

Among the aims of the Friedrich-Ebert Foundation are:

- Political and civic education in a democratic spirit from all walks of life;
- Fostering international understanding and partnership with developing countries;
- Fostering with scholarships German and non-German students with exceptional scholastic talents and especially suitable personalities as well as young graduates from Germany and abroad;
- Scholarly research in the Foundation's own institutions, supporting research projects;
- Fostering the arts and culture as elements of a living democracy.

The Foundation publishes about 20 series, among them the Quarterly "Vierteljahrsberichte - Probleme der internationalen Zusammenarbeit" (Quarterly Reports, Problems of International Collaboration), and also one in the Spanish language ("Nueva Sociedad", Caracas, reflecting a special interest in Central America). Including the headquarters it maintains 17 offices, institutions etc. It has about 760 employees, of which 122 are working outside of Germany. The Foundation maintains in their Archives of Social Democracy one of the largest private libraries with now about 340,000 books. Its annual budget is about 200 million deutschmarks.

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The main international work centers on the Third-World countries, but strong activities are also directed to Western industrial countries, East-Europe, and the Near and Middle East.

The Research Institute Department concentrates on: Foreign policy research; international research cooperation; economic policy; labor and social research; social and contemporary history; archives of social-democracy; Karl-Marx House Study Center and Trier Gallery.

#### 5.8.4. Friedrich-Naumann Stiftung

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Friedrich Naumann (1860-1919) was a Protestant Theologian, a writer and journalist, a politician devoted to promoting social welfare, a long-standing member of the German Reichstag, and a Liberal. In 1918, he founded the "School of Civic Education". The present Foundation was established by the first President of the Federal Republic of Germany, Theodor Heuss, in 1958. Its main address is:

Friedrich-Naumann-Stiftung  
Margarethenhof  
Königswinterer Straße  
D/W-5330 Königswinter  
Telephone: +49 (2223) 701-0

The Chairman of the Board of Directors is: Wolfgang Mischnick, the General Manager: Dr. Fritz Fliszar.

It is represented in the USA as:

Friedrich-Naumann Foundation  
1759 R Street, NW  
Washington, DC 20009  
Telephone: (202) 667-4885

In its charter, the Foundation lists ten principles from which all its activities arise; education, distribution of information, research, scholarships, international discussion, etc., are short indications of these activities. Much effort is spent in third-world countries, stressing the support of self-help abilities. Activities are carried out at various places, among them the center at the Margarethenhof in Königswinter near Bonn; the "Theodor-Heuss-Akademie", Archive of the German Liberalism in Gummersbach; the "European Contact and Discussion Facilities", one in Saarbrücken, a second one in Berlin. Several series of publications are issued, among them a journal: "liberal, a quarterly on politics and culture".

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#### 5.8.5. The Hanns-Seidel-Stiftung

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Dr. Hanns Seidel (1901-1961) was the first Bavarian Minister of Economics after WW II; Minister President of Bavaria (Bayern) from 1957-1960, and chairman of the Christian-Social Union (a political party, the parallel party for Bavaria of the Christian-Democratic Union) from 1955-1961.

The Hanns-Seidel Foundation was established in 1967 under the chairmanship of Dr. Fritz Pirkel. Principal Director since 1991 is Manfred Baumgärtel. The address of its headquarters is:

Hanns-Seidel Stiftung  
Lazarett Straße 33  
D/W-8000 München 19  
Telephone: +49 (89) 1258-253 and -262

The Resident Representative in Washington is:

Dr. Jürgen Miele  
214 Massachusetts Avenue, NE  
Washington, DC 20002  
Telephone: (202) 546-4744  
Telefax: (202) 546-5090

An Academy for Politics and Contemporary History, Adult Civic Education, an Institute for Foreign Relations and one for International Contact and Cooperation, scholarships, liaison bureaus and project offices in more than 60 countries are among the activities of the Foundation. It publishes the journal "Politische Studien (Political Studies)" and nine other series. Educational Centers in Wildbad Kreuth and in the Banz Monastery are the location for meetings, seminars and special studios. In each, several hundred events take place every year. Development help for the Third World in Latin America, Africa and Asia with the intention to help others to help themselves is one of the most active efforts of the Foundation. In total, more than 250 employees in Germany and more than 50 in other countries are supported by almost 600 co-workers throughout the world.

#### 5.8.6 Goethe Institute

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The Goethe Institute, founded 1951, works to distribute the knowledge of the German language and to foster international cultural collaboration in general. In addition to 16 institutes in Germany, it has 157 institutes in 73 foreign countries, employing more than 3,000 people. German government resources contribute about 270 million deutschmarks, and about 65 million more are earned from

language courses conducted in Germany. In a year, it conducts about 2,000 lectures and speeches, 1,000 musical events, 2,000 theater and 6,000 film presentations, and more than 1,000 exhibitions. For advanced teacher education, 900 seminars, 300 workshops and 400 lectures are conducted for a total of almost 60,000 participants. Almost 28,000 participants at 1,600 courses in Germany, plus more than 82,000 participants at almost 5,000 courses in foreign countries set out to learn the German language through the Goethe Institute.

The headquarters is at:

Goethe Institute, Zentral-Verwaltung  
Balan Straße 57  
D/W-8000 München 90  
Postfach 80 07 27  
Telephone: +49 (89) 41868-0  
Telefax: +49 (89) 41868-450  
Telex: 522940

The Secretary-General is Dr. Horst Harnischfeger, his deputy Karl Friedrich Schmidt.

In the United States, there are Goethe Institutes in Ann Arbor, MI; Atlanta, GA; Boston, MA; Chicago, IL; Cincinnati, OH; Houston, TX; Beverly Hills, CA; New York, NY; San Francisco, CA; Seattle, WA; St. Louis, MO; and Washington, DC. The address of the last mentioned one is:

Goethe Institute  
1607 New Hampshire Avenue, NW  
Washington, DC 20009  
Telephone: (202) 319-0702  
Telefax: (202) 319-0705;

it is led by Ute Gräfin Baudissin.

A selection of programs for 1990 for Canada and the USA lists: 22 programs in science and literature; 6 musical programs; 11 film programs; 4 theater programs; 13 exhibitions and 4 audio or video broadcasted programs, plus groups of programs for social studies, translation work, special information programs concentrating on East-Germany, and advanced education of teachers.

#### 5.8.7 German Historical Institute Washington

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The German Historical Institute - one of a series of German scientific institutes in other countries, beginning already 1888 - was founded 19087 as anon-profit private foundation funded by the German government but open to support from other sources. In its scholarly activities, the Institute is independent. It provides a

permanent basis for the cooperation of historians and political scientists from Germany and the United States. It promotes and supports historical research in various fields, including American history. Conferences, lecture series, granting of scholarships, several series of publications (among them also a Guide to Inventories and Finding Aids of German Archives) and the maintenance of an own library (currently 12,000 volumes) are among the tools used.

The address is:

German Historical Institute  
1607 New Hampshire Avenue NW  
Washington, DC 20009  
Telephone: (202) 387-3355  
Telefax: (202) 483-3430

The Director of the Institute is Dr. Hartmut Lehmann.

#### 5.8.8. Other Organizations

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A number of larger German organizations have representations in the USA, mostly in Washington. Among them are some which are doing scientific research in Germany. One is the German Aerospace Research Establishment (DLR = Deutsche Forschungsanstalt für Luft- und Raumfahrt which is one of the National Research Labs or Groß-Forschungs-Einrichtungen); its Washington address is:

German Aerospace Research Establishment  
Washington Office  
One Farragut Square South  
Washington, DC 20006  
Telephone: (202) 737-0426  
Telefax: (202) 628-3685  
Telex: 248652 gacc.

There are many American institutes dedicated fully or in part to German issues in various forms. A selection is presented above in chapter 5.2.

#### 5.9. AGREEMENTS, COMMON EXPERIMENTS

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There is little doubt that in most cases a direct collaboration between scientists of two countries is the most fruitful form of coordination, with the direct collaboration between research institutes as the next desirable possibility. Experience shows that the smallest probability for friction between the collaborators is the system in which each nation pays its own share. In this scope, the international transfer of (a) instruments, (b) scientists, and/or (c) finances may occur as exceptions, to be handled separately for each case. Government research-promoting agencies then may have a national and an international role. The national one, direct financial support of research, remains within each nation. The international role is advisory and assisting, helping in finding contacts and conducting pragmatic meetings and data exchange, etc. Especially in the field of the environmental sciences, where international experiments or field excursions are often a necessity, this form has produced most desirable results.

There are, however, cases in which more legally binding forms are required. A rather common vehicle for such cases is the bilateral "Memorandum of Understanding", negotiated between two governments or their agencies and officially signed. Because legal questions (in the case of U.S. involvement often with countries with very different legal systems) seem always to occur, often unexpectedly so, negotiations of this kind tend to take a long time; it is prudent to assign a period of two years from the first discussions to the signatures. If bilateral agreements already exist (for example between the research departments of Ministries of Defense in the form of Data-Exchange Agreements), they may serve as starting negotiation fora. If they happen to be active in the particular scientific field, NATO Research Study Groups, or Panels of the NATO Scientific Affairs Group, may also be helpful.

American research-oriented agencies sometimes have relatively large, long-standing agreements with similar organizations of other nations or with international bodies (U.N., ESA, etc.), under which individual scientists or institutes may apply for participation in international research programs.

MAIN CHAPTER 6  
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D I S C U S S I O N  
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This chapter contains:

- 6.1. Introduction
- 6.2. Basic Ideas on American/German Collaboration
- 6.3. General Level of Science in East-Germany
- 6.4. Research Institutes, Background
- 6.5. Situation after Transition
- 6.6. Chances and Recommendations
- 6.7. Practical Hints
- 6.8. Conclusion



Chapter 6.1.

INTRODUCTION

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This chapter reflects the personal impressions of two German-speaking Americans (the authors), based on recent visits in the five new länder of Germany and on discussions and reading as well as on the experience of H.D, who lived in the area before WW II. The chapter cannot claim to give a complete review; the changes inflicted on the people and the land have been profound, and the re-adjustment is still in flux.

The authors also present personal conclusions drawn from their experience. This is done in the hope that they will be helpful to American scientists interested in obtaining information on, and/or establishing scientific contacts with, colleagues and institutions in East-Germany, especially with those who had no chance yet to become internationally known by publications and conference papers.

## Chapter 6.2

### Basic Ideas on American/German Scientific Collaboration. =====

While the attitude that each of us should help the other, is a laudable one, a permanent and fruitful collaboration must be based on the motif of promoting the own scientific side by collaborating with the other side. That is a motif which should be easily understood both among American as well as German scientists and science-promoting agencies. Looking more closely into the potential, we may offer the following ideas.

President Reagan's speech at Hambach in Germany, and President Bush' word of partners in leadership signaled a new American attitude with regard to Germany, emphasizing all the time that this in no way will reduce the traditional friendship between the USA and the United Kingdom, France and other European allies. By stating this, the Americans indicated that the nature of the American/German Collaboration may be of a different nature without defining that nature. Indeed, it should not be defined, at least not yet, because it must develop.

This attitude was confirmed by the speech "Partner in der Führung: Die Notwendigkeit stärkeren Engagements\*", given on 05 September 1991 by the new American Ambassador in Bonn, Robert M. Kimmit, to the "Atlantik Brücke"\*\*, and by his first interview with a leading German newspaper conducted with its editor, Dr. Thomas Kielinger\*\*\*.

One of several first steps in this development was announced by Chancellor Kohl after his visit with President Bush in Camp David: he and his host had agreed to found an institution for which the Germans use as a preliminary name:

American - German Academy of Science.

Already some years earlier, such a foundation had been suggested and prepared within the German government by Chancellor Kohl after extensive meetings with leading American scientists and science administrators.

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\*) "Partners in Leadership: The Need for Enhanced Engagement"

\*\*) in German: Rundschreiben Nr. 7/1991, Atlantik Brücke e.V., Adenauer Allee 131, D/W-5300 Bonn 1; in English: U.S. Embassy Bonn, USIS, Press Attaché.

\*\*\*) "Natürlich ist Deutschland ein starkes Land", RHEINISCHER MERKUR, Nr. 11, S.6, 13 March 1992. An informal translation into English was done by the US. Embassy in Bonn 11; typewritten pages.

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These general and high-level developments pose the question to American researchers and research administrators whether or not they should join this development and, if so, in which way. In particular, our specific discussion on research in East-Germany is confronted with this question. It turns out that any support of the general, high-level development of scientific American/German relations should consider the research situation in the five new länder and East-Berlin as a part of the situation in all of Germany. This fact is reflected in our presentation of the agencies and organizations, especially in main chapter 4, above.

The question whether or not the indicated development should be supported is, upon closer consideration, a moot one. For the known reasons, the pressure for research cooperation between the U.S. and other countries, especially in Europe, will increase. There are specific reasons to include Germany in such efforts.

The American and German systems of primary and secondary education are different. This difference is smaller and finally seems to disappear on the graduate and postgraduate level, with the result that the similarities in scientific research by far outweigh the differences.

It is, however, of interest to assess the still remaining differences. Some of them are caused by the stronger government influence in Germany as compared with the U.S. Instead of attempting to give a theoretical definition of these differences, we quote a few examples:

We compare the situation of the U.S. National Science Foundation (NSF) with that of the German Deutsche Forschungs-Gemeinschaft (DFG): In a purely legal sense the German organization may seem to be less dependent on the government: the DFG is a private, non-profit organization while the NSF is part of the government. Even if in reality the difference is not quite as great as it seems (the DFG gets nearly all its money from the government), this form gives the DFG a slightly greater flexibility than NSF has. - Essentially, however, there are important differences: in Germany, scientists asked to provide peer review for the proposals NSF or DFG receive are designated while in the USA the NSF science officers are free to select them (there are exemptions in both cases). This imposes a far greater rigidity on the German system than would be acceptable by Americans.

The fact that in Germany practically all universities are state schools and that many research grants do not involve a private party modifies many problems of overhead or of conflict of interest. In addition, if these problems still exist, they are less likely to surface.

Another interesting difference is given by the fact that for example a university professor may leave his chair and join one of the research supporting agencies, e.g., NSF or ONR, for either one to two years in a kind of guest role or for permanent, while vice versa it often happens that a program manager, scientific officer or division director, etc. in ONR or NSF, etc. may decide to return to research and or teaching and to join a university or research laboratory. Transition of this kind occur much more seldom in Germany.

Considering the research situation in non-university institutions, we may find more similarities between the two countries. Still, a larger percentage of such institutions are firmly state supported or owned by the government in Germany than in the USA. It is often stated that dependence on the government is also increasing in America. This may be true, but it happens in a less regulated form than in Germany, leaving a larger flexibility.

Whatever the differences or similarities, the American scientist (as anyone else) who seeks scientific collaboration with Germany, will find it relatively easy to find what is being done in research in Germany because of the thoroughly organizational form. If both sides are equally interested in starting a collaboration, this fact suggests a special motivation for initiative from the American side: it is easier for us.

The most important partners for German international scientific collaboration are the countries of Western Europe inside or outside of the various frames provided by the European Community. German scientific relations with Third World Countries are also strong - and they are now extended to Eastern Europe.

The United States have always been an important partner for German international scientific relations. There are, however, distinct differences. The attempt to directly compete with American institutions on scientific fields in which the Americans possess a leading position has become a relatively rare one, maybe restricted on fields in which there are strong reasons for an own national effort. Instead, prudent German scholars are known to find important fields on which the American effort is absent or weak. Such a selective process may take place on several levels. Seen from an elevated point of view, this development indeed has the potential for a fruitful and enduring form of cooperation. In one favored view of Germany as the Junior Partner in its relationship to America, the concept of "Arbeitsteilung" has an important place: Arbeitsteilung means that each partner does what he can do best and for which the other partner may have less abilities or less inclination, while both are in agreement that each part of a common task must be cared for.

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While the Arbeitsteilung concept also plays a role in German scientific relations to other countries, say, in Europe - a German hope that they could change what the Americans are doing is still a rare event. Whether it will remain this way or not, is an interesting and important question. The American scholar dealing with Germans may do well in knowing this German attitude and the hidden potential for its change in future. Whenever he might be in a position to offer a change in the American selection or execution of a project, he may have a bargaining tool in his hands.

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Considering (a) our long-standing familiarity with both the German and the American structure, attitudes, and tendencies in science and research; (b) the substance and the tenor of the discussions in the five new länder, from the Staats-Sekretär and the University-Rektor to the young Ph.D's at their desks and laboratory benches; and (c) the programs of the agencies, organizations, foundations in Germany and in America which we have collected for this REPORT.....

.....We detect with some surprise that these programs do not reflect any promotion of the special and specific task to combine the enthusiasm and spiritual hunger which we met between Jena and Greifswald (despite of some widespread disappointment) with the experience, expertise and flexibility of their American colleagues and counterparts.

There are many programs for political or social science, history, law, economy, business, mass communication, languages, and special programs for journalists, politicians, and teachers - all important and needed - but they are only marginally if all concerned with the hard sciences. This neglect is counterproductive. In contrast to the fields quoted above, the natural sciences start from an internationally shared basis of natural laws, theories and results. Therefore, when scientists from different countries meet there exists already a solid consensus. The cases are rare where major controversies arise. Beyond their specific research, they share an interest in general topics. By the nature of their work, they may be more rational in approaching questions of general interest outside their fields.

To summarize our experiences from the five new länder, all those voices ring loud who said:

"Send us a few young Americans which bring with them the pioneer spirit, ready to push up their sleeves and start doing things -- give us for a few years an American scientists to direct our institute, to teach us how to manage research and how to market

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it --- we should like to visit the USA in order to see how these things are done there, --- to become aware of new scientific trends and needs to be taken care of, not in competition to the work of our West-Germany colleagues but in supplementing what they do --- we simply have to find out directly how the American image had been distorted by our former government --- we think that also we could and should do what the Russians now practice in their new relationship with America..."

Indeed it should not even be necessary to hear such voices. Simple observation and reasoning should tell us that well founded and carefully defined actions or specific programs for the scientists and institutions in the five new länder and East-Berlin are called for, and that the American potential might be tapped.

The present shortcoming just described is probably not so much caused by lack of funds as by lack of initiative and organization.

CHAPTER 6.3

GENERAL LEVEL OF SCIENCE IN EAST-GERMANY  
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Ever since the Thirty-Years War (1618-1648) and until 1871, Germany was a quilt of frequently changing and practically independent principalities of various and varying sizes, keeping a memory of the former powerful Holy Roman Empire of the German Nation more or less alive. After 1648, the power of the Emperor, outside of his own principality, was almost nil. The concept of a German identity persisted in the minds of most people, but it was not subjected to the workings of a common government. This situation was not unfavorable to the rise of a multivariied spiritual life, especially in the period of the Enlightenment and thereafter. The general level of knowledge and of creative spiritual ability in Germany at that time was comparable to that of the West European nations and North America. After the German unification of 1871, this high level was maintained and manifested itself in an excellent university system and in nearly all areas of cultural life, also supporting a high-level industry. Free expression of independent thought was somewhat restricted in the Kaiser-Reich, 1871-1918, leading to the uncertainties typical for the Weimar Republic 1918-1933. After 1933, it was totally suppressed by the Hitler government and was only won back in the Eastern part in 1989/1990. It is important to remember that the people in the five new länder did not experience free discussion for a period of almost 60 years.

In this period, the high level of university education and research could not be maintained throughout but the decline was not a general one, nor did it occur in all branches to the same degree. The necessity to maintain a fairly high level in the natural sciences and engineering, for example, was dictated by the continuing needs of industry. In addition, after 1945 the former German Democratic Republic established an increasing contact with scientific institutions in the USSR and the other Warsaw Pact states. In this process, the GDR did not fare badly, in some branches of science it became the leader. To maintain a high level of science education at East-German universities was in the interest of all in the East, even if in some critical points, political reasons were given preference. - It is well known that the suppression of freedom in teaching and research had catastrophic consequences in the humanities, under Hitler and later in the GDR. Even there, however, a small number of researchers were able to find niches of little interest to the politicians where they could do good work.

The East-German population emerging in 1989/1990 from the communist rule, shows a low level of general knowledge on broad fields of the humanities, especially history, global geography, jurisprudence, Western languages and modern literature, and, of course, political and social sciences. This is less pronounced for

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those whose parents were able to inform them better than the schools did. However, as an average, we find an acceptable level of knowledge in the sciences, from mathematics to physics, chemistry and biology or the medical domains\*. This is true for all levels, from elementary school to postgraduate university. In spite of this acceptable level, the substance of such knowledge may often be different from that of the West. Obviously, scientists in the five new länder will know more about the work done in Eastern countries and less about the Western situation than most of their Western colleagues might know - but the differences also extend into scientific knowledge itself, as a result of the strong isolation imposed by the government of the former GDR. While the colleagues at the East-German institutes may often be ignorant of details in the latest Western scientific progress, in some cases they found their own different ways and new results. Differences in scientific level between the institutes in the former GDR and the West will be discussed later.

In the GDR, as in other East-Bloc countries, the distribution of scientific knowledge, as good or bad as it might have been, among the social strata of the population is different from that in West-European countries. Communist governments introduced means to get university students from families which otherwise would not have considered such an education for their children, while often children from some better situated families may have encountered obstacles which were impossible or difficult to overcome.

As to foreign languages, Russian was mandatory, some could also learn English. Among those scientists who had no English in school, we may find a significant percentage who studied it on their own which constitutes an impressive achievement. There was not much free time for this purpose: after the common working hours, many evenings and/or weekends were occupied by mandatory political and military training. They studied English because they were convinced that one day they would need it to become a member in the international scientific community. It may have been risky to show such a conviction openly.

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\*) Some gaps opened in the fields of environmental science. These fields were, in part, seen by the government as potentially hostile to its actions. It is by now well known the world over that the pollution and deterioration of the human environment, the air, rivers and lakes and the soil in the East-Bloc countries was enormous and often catastrophic. It is also obvious that the governments there were much part of the blame for this severe situation. Therefore, in a former East-Bloc country, to find something bad with regard to pollution - indeed to know the facts about it - was dangerous. In the opinion of the author, the West-German television (which could be seen in most parts of the GDR) can hardly escape the blame to not having informed the people about these dangerous or even fatal facts.



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When looking at the situation in the five new länder as it emerged from nearly 50 years of communist rule, and seeing the often desolate conditions there, one should, however, not forget one important fact:

Before World War II, this had been one of the most prosperous regions of Germany where a large percentage of industries such as aircraft, automotive, electrical, heavy machinery and textile were located. Here, about 65% of German exports in the quoted industrial fields originated. In some regards, this region was leading worldwide. The population had the reputation of being industrious and innovative.

A cautious promotion by West-Germany may result in a come-back of these values and potentials. German Telekom now claims that they are constructing there a telecommunication network which will be the most modern one in Europe. In other fields, too, the advantage of beginning from scratch with sufficient outside help may produce a second, albeit different "German Miracle". There is the expectation that in 15, 20 years this area will be ahead of the Western part of Germany in many aspects.

It goes without saying that this development will have a large influence on the "Research Landscape".

#### CHAPTER 6.4

#### RESEARCH INSTITUTES IN EASTERN GERMANY - GENERAL BACKGROUND

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These are impressions. As such, take them with caution. We think that our impressions are quite descriptive of approximately 60% of the institutes, in spite of their variability. Further, the situation described may be taken as an average for the other 40% from which, however, deviations in both directions may be large.

Above, in chapter 3.2, the building of a new research structure has been mentioned, including the fact that errors were made in that process. As a whole, however, many will agree that the task was better performed than most people involved had dared to hope.

Others, for example the President of the "Wissenschaftsrat" (Science Council), Prof. Dieter Simon himself, did hope that a reformation of the total German scientific structure could be done, taking advantage of the radical political changes. According to two articles in the FRANKFURTER ALLGEMEINE ZEITUNG (19 March and 30 December 1991), he had hoped that a critical review of certain parts of the German system of education and research could be conducted but was disappointed that this did not occur. According to the RHEINISCHER MERKUR of 21 February 1992\*, Simon thinks that it is not yet too late for such a fundamental investigation but, as he has stated at a different occasion, it is in the hand of the politicians.

As already pointed out, most (but not all!) of what Western scientists would call "research" was done in non-university institutes. These institutes were mostly under the Academy of Sciences in Berlin with headquarters in the Otto-Nuschke-Straße 22/23 (now again Jäger Straße) and most institutes also in East-Berlin.

For the GDR government, the political reliability of the directors of these institutes was often more important than their scientific abilities. Again, this does not apply to all of them. Also, being believed as being politically reliable does not necessarily destroy the ability to do good scientific work. We have been told that there were institutes in which all the scientists including the director were against the government, but in order to protect his employees the director had to find some compromise with the government. This then may have made him a victim of the purification after the reunification of Germany. This purification was quickly and strongly performed. As a consequence, some scientists found themselves to their own surprise in the position of acting directors of their

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\*) Rainer Klofat: "Weichensteller auf neuem Terrain". RHEINISCHER MERKUR, no.8, p.15, 21 FEB 92.

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institute in a most difficult time; they also wanted to, and had to continue their scientific work but, in a third capacity, had to turn partially into politicians in order to protect their institutes. To do good scientific work in these institutes was difficult. But it had to be done and - according to our own observations and those by other visiting Americans - also mostly was done, nevertheless. Contacts with the scientific world outside the Eastern Bloc were - not in all cases, but mostly - rare and difficult to maintain. Letters from the West did not always arrive, it often was unknown whether or not letters to the West were forwarded. Publication in prestigious western journals was mostly impossible because hard currency for page charges was not available. Travel to the West was always difficult but in the 1970's the "Reisekader" ("Travel Teams") principle was introduced, allowing only a restricted group of persons to travel, not necessarily the experts for the scientific field in question. Therefore, there were hardly any papers by East-German investigators presented in Western top conferences. Of the traditional scientific journals possibly one copy was subscribed to for a university town; to get new journals was mostly impossible (again, there were exceptions, e.g., when the government thought that a particular journal was essential for a particular scientific task they wanted to promote). Powerful and reliable computers were practically unobtainable. So were scientific instruments from the West.

To work under such conditions was not only difficult (as just pointed out) but it also required the development of certain attitudes and skills. We were impressed by the scientific ethic of many of the colleagues we met. Obviously, they could see their work as a meaningful one only if they believed that doing something for science has a merit in itself. Guidance from above was often missing or useless. Details of new Western scientific insights, paradigms, and theories were not always available, one had to develop some hypotheses of one's own. Measuring instruments had often to be designed, developed and built independently; an uneconomic way but also a way which produced some interesting results, experimentally, in understanding the limitations of experimental data, and sometimes arriving at new solutions for measurement problems. Likewise, to work with the insufficient Robotron computers often required the development of own methods and programs.

Some deep disappointment among the scientists in the East was expected after re-unification. From their point of view, the scientific ethic of their colleagues in the West left something to desire. They had sometimes the feeling that the pre-occupation with their own work blinded the Western scientists with regard to the potentials and needs of their Eastern colleagues. In other cases, fear of competition from the East seemed to be the motif for negligence or even hostility. It is difficult to determine whether or not such attitudes are warranted by facts. I believe, sometimes they are, but we must not forget that

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the people in the East had been trained by their education and their newspapers to expect attitudes of this kind from the West. Even without such disappointment it is difficult for people in the East to understand Western ways of progressing. How do you have to act in order to convince a Western colleague that your proposal has merit? How do you manage research so that you get results of interest to the West, and also in a way which convinces Western visitors that you do it right? How do you market your own scientific and research potential and that of your colleagues, your institute? How do you market research results?

There are cases in which the colleagues working at an institute in East-Germany were convinced that they had made a scientific breakthrough and now believed that this would be highly welcomed by their Western colleagues. This did not happen, in spite of the fact that better access to the Western status in that scientific specialty showed them that they were, indeed, ahead. Instead, they encountered benign or hostile neglect.

These problems wait for solutions. We heard from leading West-German institutions that they are developing methods to overcome them by diminishing them step-by-step. Such efforts are not always welcomed in the East. The Marxist ideology did not always die with the Marxist state. We meet here and there the opinion that this ideology is basically good but was applied in a wrong way. This opinion may result in an inner resistance to even the best-intended and most promising West-German efforts. We cannot expect that all West-German contact persons are equipped to deal with such ideological problems.

Do we find here a motivation for the call (which we heard several times during our visits) to send young Americans to work there for a few years, roll up the sleeves and instill the pioneer spirit as well as the basic facts of democratic life and democratic government?

CHAPTER 6.5

SITUATION AFTER TRANSITION  
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For any consideration of collaboration with scientists and institutions in the five new länder and East-Berlin, the first question to be asked is for the relative quality level between them and their Western colleagues.

Let us, first, briefly state our opinion arrived at after looking into the situation. We would not have spent the large amount of work invested in this report and into the collection of information needed for it, if we should not have been convinced that it is worthwhile. In one sentence:

The general Western belief that because we did not hear of scientific achievements obtained in East-Germany, the scientific level there must be low, turned out to be wrong.

This requires a broader and, above all, deeper discussion.

It will take five years or more until the same level of the quality of life is reached in East-Germany as they enjoy it in the Western part of the Federal Republic. This progress will not be even, rather it will occur in spurts different in every aspect. Rebuilding of the main roads and establishing a very modern communication system can certainly be done in less than five years, and by then every large or medium-size town will have at least a few streets and a few quarters which please the eye and are comfortable for the people living there. Refurbishing the other parts of the town and the remainder of the roads will take much longer than five years. Whether the less-used lines of the railroad network will be maintained and how quickly the Deutsche Reichsbahn (Eastern railroad system) will be comparable to the Deutsche Bundesbahn (Western railroad system) is difficult to predict. The plans for high-speed magnetic levitation trains between Hamburg and Berlin, Bonn and Berlin, and Dresden and Berlin are less fantastic as they may appear to the American observer: the need for such a system and the expected benefits from it are larger for a country like Germany than they are for the USA.

Predicting the development of the "spiritual infrastructure" is more difficult. The understanding of the fundamental concepts of democracy by the leaders and the people, the evolution of a modern and democratic juridical system with the courts and the lawyers, the establishment of working local government systems with active participation of the people, the development of a social service system which does not destroy the self-esteem and own initiative of the individual, the growing of a large middle-class of the population together with the emerging commercial structure, the reformation of

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the schools into units which educate free and responsible personalities and provide sufficient moral as well as scientific knowledge - all this requires guidance and acceptable models which still seem to be remote from the places where they are needed. The unconscious and half-conscious background within the people upon which a democratic system is being erected, is different for the present generation in the five new länder than it was 1945 for the population of the three Western occupation zones of Germany. Then, after twelve years of the nazi-regime, people still remembered how it had been before, and some leaders of the republican system who had experienced the nazi time were still alive and ready to take over. When the GDR collapsed, the people there did not have much contact any more with a time 60 years ago. There is no "Eastern" Adenauer or Heuß. Instead of the Americans and British offering democratic concepts and systems, there are now West-Germans imposing ready-made structures of democratic government. (If we speak with colleagues there, these things will only seldom be mentioned. It is, however, advisable to know of them).

Collecting opinions among West-Germans about the time needed for East-Germany to catch-up with the Western part, we get very different answers depending on whom we ask. Indeed, in this general form, the question is meaningless. The West-German lawyer, thinking about the unacceptable form of Eastern jurisprudence, will arrive at a very high estimate, ten years or so. More or less convinced that no public life can function satisfactorily without a well-functioning legal system, he is prone to extend this estimate to all forms of life in the new länder. The West-German scientist, remembering the fact that the institutes in the East are in the turmoil of a sometimes radical re-organization, and having heard about the inadequate library service and the lack of modern instrumentation and computers, is more likely to arrive at estimates below five years, maybe three or even two. He may doubt whether a strong motivation and the practical possibility exist to reduce that time.

Looking for more substantial evidence, we arrive at a different result. Scientists from the GDR who managed to escape to the West, generally had no problems to be fully accepted as equals by their colleagues after a very short time. American scientists who traveled to the five new länder and visited research establishments in their own narrow scientific field, often report that their colleagues there were fully up to Western standards. Sometimes they found that the problems under investigation there were one or two years behind but added that gap will probably be quickly closed once all the restrictions have been removed. Which restrictions still exist? Above all, many salaries are still much lower while many prices are not and others are increasing fast. Travel to the West is no longer forbidden but still too expensive for the small budgets allotted to their institutes, in particular when considering the large catch-up needs.

The scientists' ability to close any still existing gap is essentially increased by special skills acquired by them to overcome the severe restrictions they encountered.

In the East, we may encounter the firm belief that the superiority of the West-German institutes is not always as outspoken as had been claimed. We have also heard that some in the West express opinions which are not based on facts, even that they grade down their Eastern colleagues for competition reasons.

Looking for a more quantitative approach to our question, we investigate a parallel question, namely how quick industry and economy will catch up\*. Here, we do not consider large companies where the differences between a relatively small number of enterprises can make a large difference for the whole, but we consider small and medium companies of which there is a great number, promising a more reasonable statistics. In Western Germany, with headquarters in Bonn, there exists the "Arbeitsgemeinschaft Selbständiger Unternehmer" (ASU : Association of Owners of Independent Businesses) with its president Volker Geers. It has about 7000 members, and more than two-thirds of these have engaged themselves in the five new länder. More than 1100 companies responded to a series of questions, providing us with a usable statistics. In 1991, 23% of these experienced an improvement above the year before, and 19% obtained a stability; therefore, for 42% the specific crisis may have bottomed out. Of the 58% which are still in debt, 38 are in the establishment process, and 20 expect a longer difficult period ahead\*\*. Some new companies are, indeed, already flourishing, yes, it has already happened that an East-German company bought a West-German one. West-Germany established a special bank (Kreditanstalt für Wiederaufbau) to help part of the development; until November 1991 it already provided 24 billion DMK, in almost 50,000 individual loans\*\*\*.

We feel that our statement at the beginning of this chapter is sufficiently vindicated by these facts.

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\*) remember that this region was highly industrialized before World War II (see above, under 6.2.).

\*\*) The article "Der Scheinarbeit den Kampf angesagt" by Hans Martin Kölle, on page 11 of No.51, 20 December 1991, of DER RHEINISCHE MERKUR, which reports the numbers given here, provides much more economic information. So does the other article quoted hereunder, on the same page.

\*\*\*) Theo Mönch-Tegeder "Die Progressiven Bundesländer", DER RHEINISCHE MERKUR, No.51, p.11, 20 December 1991.

## CHAPTER 6.6.

### CHANCES AND RECOMMENDATIONS

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The general intellectual atmosphere in the new länder of Germany is sometimes described as exciting and excited. The "excited" state includes also much bitterness and disappointments, but for the American visitor the impression of optimism prevails as far as we could observe. People are fully aware that they are confronted with a huge work of a unique nature with high potential and deep risks, for which no recipes are available. There is the possibility of a second "German Miracle", maybe beginning in 1993 or 1994? Some foreign interested groups (especially from Europe and Asia), remembering the first one, are already active in the five new länder, especially in East-Berlin (formerly the capital of the GDR, and the seat of many scientific institutes).

It is a generally acknowledged fact that science is becoming so multifaceted that many institutes, even many countries cannot afford to do the necessary research without the collaboration of others. The potential of such collaboration is, however, not fully evaluated. Some new ways may have to be sought, and, as our experience has taught us, can be found. In the following, we discuss only international collaboration with special emphasis on East-Germany.

The first step is, of course, the definition of our own needs. For example: A researcher may recognize that there are analog problems potentially influencing his current work, even analog problems from a different discipline. He cannot solve them for several possible reasons, for example: (a) there is nobody on his laboratory with the special expertise to do it, (b) he does not have the facilities needed, (c) neither he nor his sponsor can afford it. In environmental sciences: the needed environment may not be available without collaboration with a foreign partner.

The second step to collaboration is to find a partner and to obtain, at least, some preliminary information not only on the scientific capability of the potential partner but also on his actual possibilities for an international collaboration. Sometimes, the first part of this problem does not pose a difficulty because partners may be already known from publications or former contacts; in other cases, especially with partners in Eastern countries including East-Germany, this is not so. There, topics of research are shifting, also publishing in Western journals as well as travels to Western institutes were and often still are restricted. - The second part of this second step may be more difficult because we mostly do not know the possibilities of foreign partners to participate in international collaboration. We may be reluctant to approach a foreign partner without having at least some information on this point. His as well as



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our possibilities may be restricted or rather generous, including or excluding transfer of finances, researchers, or equipment. In most cases, additional knowledge will be desirable before a proposal for collaboration is initiated.

The third step, making contact with a potential partner, will often necessitate mutual visits. This can involve financial problems for the one or other, or both sides; some possibilities for support exist.

The fourth step may involve considerable difficulties: a decision on the legal form of collaboration, and, if necessary, the establishment of the legal framework. If any such considerations can be excluded, as it often will be possible, both sides will be spared a considerable amount of effort, problems alien to the average scientist, loss of time, and disappointments. There are, however, several legal frameworks for the cases in which they may be required.

This REPORT is being written to encourage and to facilitate cooperation between American scientists and institutes on one hand, and their counterparts in the Eastern parts of Germany on the other. It contains information helping the implementation of the four steps discussed in the preceding paragraphs. More practical hints will be given below under 6.6.

When considering such cooperation, a specific European, especially German, fact should be remembered. In part because of the rather close relationship between Government and research, information on ongoing research is extensively published in structured forms, even sometimes in the English language. For details see above in our chapter 3, and below under 6.6.

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## Chapter 6.7

PRACTICAL HINTS  
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How can this REPORT be used to practically establish desirable contacts? How can it help to learn where desirable contacts may be located? Which additional hints can be given reaching beyond the limits of this REPORT, for example more into the field of advanced development or industrial research?

At present, no reliable survey can be given for research done at universities in East-Germany. However, as pointed out in this REPORT, most research had been shifted from universities to institutes of the Academy by the former GDR. This deliberate process will take years to be reversed, while research is going on in the reorganized institutes.

For a first approach to learn which research is being done, look into Part B of this Report. The names of the institutes listed will allow to narrow the field of selection considerably. A further step involves looking into the work descriptions of the institutes listed there. Thereafter, it becomes slightly complicated because there are several sponsoring agencies and organizations. Each annually lists the research supported by it. Often, several such lists may have to be consulted. They are all available but some only with difficulties.

The Federal Ministry for Research and Technology annually edits the "Förder-Katalog" listing all individual projects supported by FMRT, see above under 4.2.3. We found it in the German Embassy in Washington where the Science Attaché had a copy. It is a very voluminous book and we cannot expect that copies can be given to individual researchers or institutes.

Additional and less voluminous sources are the annual reports of the Deutsche Forschungsgemeinschaft (see above under 4.5.2) and of the Max-Planck Society and the Fraunhofer Society (see under 4.5.2.1 and 4.5.2.2).

For work done at the institutes known as GroßForschungseinrichtungen (Large Research Institutions, National Research Laboratories), the Program-Budget of AGF (Arbeitsgemeinschaft der GroßForschungseinrichtungen), edited annually, discusses in detail the research and development topics (see under 4.5.2.3).

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For work done in the Blue-List Institutes as well as in institutes fully owned by a land government, the cognizant Standing Conference of Science etc. Ministers in Bonn (see 4.3.1.) or the ministry of the land could be asked (see under 4.4). The rather young organization called "Arbeitsgemeinschaft Forschungs-Einrichtungen Blaue Liste" (Working Association of Research Establishments of the Blue List) counted 67 of the 83 Blue-List Institutions among their members in July 1992, and that number will probably grow. See above, 4.5.2.4.

Work conducted in institutes which belong to the one or other Federal Ministry ("Ressort-Forschungs-Einrichtungen", see 4.2.5) is supervised by these and should generally be available from their annual reports.

Applied research and development done in independent institutes (e.g. especially for industry or small-business; not described in this REPORT) is known to AIF ("Arbeitsgemeinschaft industrieller Forschungsvereinigungen "Otto von Guericke" eV = Working Association of Industrial Research Groups), see above under 4.5.2.5. A book edited by their Berlin office in 1991 lists 191 such institutes in East-Germany alone and gives rather detailed descriptions.

In all cases, direct inquiries with the ministries or the headquarters of the organizations supporting research can be recommended, one will almost always find a kind response. Addresses etc. are given in this REPORT. Finally: As long as the authors of this REPORT have current material, they are willing to help.

For obtaining information of this kind within the USA, a new system is being set-up at present. The director of the TECHNICAL REPORTS SECTION, Science and Technology Division, Library of Congress, Washington, DC, 20540, Dr. John Feulner, has agreed to collect information material of this kind provided by the German sources, and to make it available to American institutes and scientists upon request. His telephone number is (202) 707-5664, fax (202) 707-1925; see also 4.7.2. It will take a few months before any substantial material is there, and even longer before any kind of completeness can be achieved. If the American scientist cannot come to the Library of Congress, the Technical Report Section is basically willing to select material and copy it to a requester. It may, however, be preferable to browse through that material in the halls of the Library of Congress. Dr. Feulner's collection is not expected to have papers or scientific reports of ongoing or completed research; instead it should be able to point to such reports which may then be found in other parts of the Library of Congress.

Digital data banks of the same or similar type of information, in part on-line accessible, are discussed in 4.7.3 through 4.7.6.

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## CHAPTER 6.8

## CONCLUSION

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This Report provides information on the structure and substance of research in the area of the former German Democratic Republic, now usually referred to as the five new länder (plus East-Berlin) of the Federal Republic of Germany. This includes hints or more substantial information on the fact that many German organizations or agencies are interested in supporting international scientific collaboration. Often, the foreign partners are either developing nations or nations from the former East-Bloc, but similar joint efforts do also exist with other Western nations including the USA.

The authors volunteered personal related opinions in main chapter 6, "Discussion". With or without these, the reader can draw his own conclusions from the information in this Report. In addition, in chapter 6.5 and 6.6, the authors offer ideas how the information may be used within the context of the American research effort.

This outline of hypothetical possibilities is not meant to imply that chances for a collaboration are just waiting to be realized. In spite of much rhetoric about international collaboration and in spite of many practical and successful attempts, a thorough investigation and analysis of the potential, possibilities and benefits does not seem to exist as yet.

Obviously, in the long run, both parties will benefit from a collaboration assuming that no room is left for one-sided exploitation. Quite understandably, such a fear has been expressed on both the American as well as the German side. A frank discussion of the possibilities is the best way to overcome obstacles of this kind. Examples such as the SAXON-FPN Experiment in 1989 indicate that this is possible.

The need for collaboration is already visible, and it will increase. By beginning on a small scale, extending it through careful discussions and negotiations, the advantages should become convincing for both sides, leading to a realistic mutual benefit. One of the authors has been involved in creating the SAXON-FPN experiment. He feels that ways exist, derived from such experiences as well as from familiarity with the persons and the conditions of both sides, leading to the results all are looking for.

The emergence of the new East-German Research Landscape offers one welcome occasion.

MAIN CHAPTER 7  
SHORT LIST OF (NON-UNIVERSITY) RESEARCH INSTITUTES  
IN THE FIVE NEW LÄNDER AND EAST-BERLIN  
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contains:

- 7.1. Introduction
- 7.2. "GroßForschungsEinrichtungen" (National Research Labs)
- 7.3. Institutes of the Blue List
- 7.4. Fraunhofer Establishments
- 7.5. Branch Laboratories of Fraunhofer Institutes
- 7.6. Max Planck Institutes and Working Groups
- 7.7. Remarks on University Institutes
- 7.8. Remarks on other institutions

ATTN: Institutions dealing with agriculture or forestry as well as with the Humanities are not incorporated in this list.

## CHAPTER 7.1

### INTRODUCTION

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#### 7.1.1. Notes on the preliminary list of non-university institutes

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Three-digit numbers from 002 through 098, preceded by a pound-sign (#) are page numbers (one institute per page) of a German list which the author considered as the most authentic one at the time of this writing. It is the "Pressedokumentation 03/92" of the Federal Ministry for Research and Technology, called: "Kurzdarstellungen der neuen Forschungs-Einrichtungen in den neuen Ländern und Berlin", dated 10 January 1992\*. Numbers beyond 099 have been assigned ad hoc by the authors to institutions which were not included in the above list, they are in no way systematic.

The words "at the" - in German text : "an der" -, followed by the name of a university, identifies a specific situation now often introduced in Germany: the institute named left of "at the" is not part of the university named right of "at the". It is a non-university research institute, financed from a non-university source (e.g., the Max-Planck Society) but it has established certain formal ties to the university. In the United States, the relationship between the "Applied Physics Laboratory" and the "Johns-Hopkins University" provides a similar example.

In this main chapter 7 of the REPORT, only names and addresses of institutes are provided as taken from the above mentioned "Kurzdarstellungen". At the date of its publication (i.e. ten days after the deadline for the changes as laid down in the German Unification Treaty) this seemed to be the most reliable information. The names of the institutes are given in English translation, followed by the German name. The latter is part of the postal address. When an address was not known, a substitute address is given: most often that of a West-German institute related to the East-German one. In some cases, the institute itself does not yet have a clear address, then the address of its "Founding Director" is given. Some addresses of the Blue-List Institutes have been updated per 26 June 92 from a list provided by the Arbeitsgemeinschaft Forschungs-einrichtungen Blaue Liste.

The lists of non-university institutes in Report B and of the universities in Part C reflect some minor changes which came to the attention of the authors after Report A had been written.

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~\*) missing numbers from 001 to 099 were either related to headline pages or are associated with institutes of the humanities or of scientific fields of lesser interest in the scope of this REPORT.

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### 7.1.2. General remarks on the acquisition of the information

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Information on the institutes in the five new länder and East-Berlin is still incomplete, in parts sufficient, in other parts only sketchy. This is a consequence of the situation. Aside from institutes which were discontinued, changes of the following facts occurred in almost all cases, often repeatedly:

- Affiliation of the institute
- Size of the institute
- Name of the institute
- Internal organization of the institute
- Name of the Institute Director and/or Person of Contact
- Name of the street in the institute's address  
(sometimes even the name of the town).

What remained? The core of the scientific task and with it the expertise of the scientists involved in this task; it is true, often some additions or subtractions from the scientific task were made, involving also the personnel. In general, the physical facilities were maintained at least in most parts. Very few institutes established an "official" English name for themselves, therefore, different translations of the same German name may provide the impression that one deals with more than one institute. Another problem was given by the experience that lists of institutions issued by various German sources almost never agreed with each other.

Collection of information was difficult in spite of the fact that in nearly all cases the German personnel and institutions involved in giving information were very helpful. Often, the situation was so much in flux that no valid information existed. Pressure to respond to the (frequent and sometimes cumbersome) official requests made by Bonn or Berlin or the land government naturally superseded our own asking for information. Also, persons who had promised to provide information, sometimes were unexpectedly replaced without the author's immediate knowledge.

As a consequence, the material in this REPORT (especially in parts B and C) is uneven. In some cases, we have only one or two lines of institute descriptions, in others up to ten pages. Some material may be slightly outdated. While part A is being readied for editing and printing, material for parts B and C is still coming in.

One problem was given by translation difficulties. Sometimes, German technical terms were not known to American colleagues and the possibilities to ask the German origins for an explanation were restricted by the gross inadequacies of the telephone system in the former GDR.

CHAPTER 7.2

GROSS-FORSCHUNGS-EINRICHTUNGEN  
(NATIONAL RESEARCH LABORATORIES)  
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A central organization is the "Arbeitsgemeinschaft Großforschungs-Einrichtungen" (approx. translation: Working Association of National Laboratories), described above under 4.5.2.3.

#002 Center for Molecular Medicine (CMM)  
Centrum für Molekulare Medizin (CMM)  
c/o KAI e.V.  
Jäger Straße 22/23  
D/O-1086 Berlin

#003 Environmental Research Center Leipzig/Halle Inc.  
Umwelt-Forschungs-Zentrum Leipzig/Halle GmbH  
Permoser Strasse 15  
D/O-7050 Leipzig

#004 Research Center Berlin-Adlershof of the DLR including Satellite Ground Station Neustrelitz (DLR = German Aerospace Research Establishment)  
Forschungszentrum Berlin-Adlershof der DLR einschließlich der Satelliten-Boden-Station Neustrelitz (DLR = Deutsche Forschungsanstalt für Luft- und Raumfahrt)  
Rudower Chaussee 5  
D/O-1199 Berlin

#005 Society for Mathematics and Data Analysis, Research Center for Innovative Computer Systems and Computer Technology (FIRST)  
Gesellschaft für Mathematik und Datenverarbeitung, Forschungszentrum für innovative Rechnersysteme und -technologie (FIRST)  
(East-German institution with administration in West-Berlin)  
Hardenbergplatz 2  
D/W-1000 Berlin 12

#006 Geologic Research Center - Potsdam  
Geo-Forschungs-Zentrum Potsdam  
Telegrafenberg  
O-1561 Potsdam

#007 Alfred-Wegener-Institution for Polar and Ocean Research - Research Institute for Continental Polar Research (AWI-Potsdam)  
Alfred-Wegener Institut für Polar- und Meeres-Forschung;  
Forschungsstelle für kontinentale Polar-Forschung  
Telegrafenberg  
D/O-1561 Potsdam



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#008 DESY Zeuthen (DESY = Deutsches Elektronen Synchrotron)  
Platanenallee 6  
D/O-1615 Zeuthen

#009 Branch Lab of the Institute for Plasma Research (IPP):  
"Fusion-Oriented Plasma Physics," Berlin  
IPP-Aussenstelle "Fusions-Orientierte Plasma Physik", Berlin  
Hausvogteiplatz 5 - 7  
D/O-1086 Berlin

#010 Hahn-Meißner-Institut Research Group "Photovoltaic" Berlin  
HMI-Forschungsgruppe "Photovoltaik" Berlin  
Rudower Chaussee 5  
D/O-1199 Berlin

#011 Institute for Polymer Chemistry (Working group Membrane  
Research of the Institute for Chemistry of the GKSS)  
Institut für Polymeren-Chemie (Arbeitsgruppe Membran-Forschung des  
Instituts für Chemie der GKSS)  
Kantstraße 55  
D/O-1530 Teltow

#012 Institute of the GKSS for Research on Rivers, Lakes and  
Underground Water  
Institut für Gewässer-Forschung der GKSS  
Domplatz 8 - 9  
D/O-3110 Magdeburg

CHAPTER 7.3

INSTITUTES OF THE BLUE LIST  
(BLAUE LISTE INSTITUTE)  
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For general information contact the "Bund-Länder Kommission" (Standing Commission of the Federal and Länder Cognizant Agencies), described above under 4.3.3.; a central organization (to which, however, not yet all institutes belong) is the Arbeitsgemeinschaft Forschungseinrichtungen Blaue Liste, AG-BL (Working Association of Research Institutions of the Blue List), described above under 4.5.2.4. (Nos. #013 and #042 are not in the List of FMRT but were provided by the AG-BL).

#013 Paul-Drude Institute for Electronics of Solids  
Paul-Drude Institut für Festkörperelektronik (PDI)  
Hausvogtei Platz 5 - 7  
D/O-1086 Berlin

#014 Institute for Solid State Physics and Materials Research Institut  
für Festkörper-Physik und Werkstoff-Forschung (IFW)  
Helmholzstrasse 20  
D/O-8027 Dresden

#015 Institute for Polymer Research, Dresden  
Institut für Polymer-Forschung Dresden, e.V.  
Hohe Strasse 6  
Postfach 411  
D/O-8010 Dresden

#016 Research Institute for Molecular Pharmacology  
Forschungs-Institut für molekulare Pharmakologie  
Alfred-Kowalke-Str 4  
D/O-1136 Berlin

#019 Institute for Astro Physics  
Institut für Astrophysik  
Rosa-Luxemburg Straße 17a  
D/O-1590 Potsdam-Babelsberg

#020 Institute for Applied Analysis and Stochastics (IAS) Berlin  
Institut für Angewandte Analysis und Stochastik (IAS) Berlin  
Hausvogtei Platz 5 - 7  
D/O-1086 Berlin

#021 Research Center Rossendorf (FZR)  
Forschungs-Zentrum Rossendorf  
Bautzner Landstrasse  
D/O-8051 Dresden

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#022 Institute for Non-Linear Optics and Short Time Spectroscopy  
Institut für Nichtlineare Optik und Kurzzeit-Spektroskopie  
Rudower Chaussee 6  
D/O-1199 Berlin

#023 Institute for Low Temperature Plasma Physics  
Institut für Nieder-Temperatur Plasma-Physik (INP)  
Herrn D. Schlott  
Robert-Blum-Str 8-10  
D/O-2200 Greifswald

#024 Institute for Surface Modification  
Institut für Oberflächen-Modifizierung (IOM)  
Herrn Prof. Dr. F. Bigl  
Permoser Str. 15  
D/O-7050 Leipzig

#025 Working group "Electro Luminescence" of the Hahn-Meißner  
Institute, Berlin  
Arbeitsgruppe "Elektro-Lumineszenz" des HMI, Berlin  
Hausvogteiplatz 5 - 7  
D/O-1086 Berlin

#026 Institute for Plant Genetics and Research on Domesticated Plants  
Institut für Pflanzen-Genetik und Kulturpflanzenforschung  
Herrn Bernhard Eise  
Correns Straße 3  
D/O-4325 Gatersleben

#027 Institute for Plant Biochemistry  
Institut für Pflanzen-Biochemie  
Weinberg 3  
D/O-4050 Halle/Saale

#028 Institute for Crystal Cultivation  
Institut für Kristall-Züchtung (IKZ)  
Herrn Schöch  
Rudower Chaussee 6  
D/O-1199 Berlin

#029 Institute for Semi-Conductor Physics  
Institut für Halbleiter-Physik Frankfurt (Oder), GmbH  
Walter-Korsing-Str. 2  
D/O-1200 Frankfurt/Oder

#031 Institute for Baltic-Sea Research  
Institut für Ostsee-Forschung (IOW)  
Seestrasse 15  
D/O-2530 Rostock-Warnemünde

#032 Institute for Atmospheric Physics at the University of Rostock  
Institut für Atmosphären-Physik an der Universität Rostock  
c/o Außenstelle des Heinrich-Hertz-Instituts für Atmosphärenforschung  
und Geomagnetismus: Observatory Kühlungsborn  
D/O-2565 Kühlungsborn/Ostsee

#034 Ferdinand-Braun-Institute for High Frequency Communications  
Technology and Optoelectronics  
Ferdinand-Braun Institut für Hochfrequenz-Kommunikations-Technik und  
Opto-Elektronik  
Rudower Chaussee 5  
D/O-1199 Berlin

#035 Institute for Physics of the III-V-Semi-Conductors  
Institut für Physik der III-V Halbleiter  
Hausvogteiplatz 5-7  
D/O-1086 Berlin

#036 Research-Institute for Climatological Problems and Consequences  
Institut für Klima-Folgen-Forschung  
Prof.Dr.H.-J.Schellnhuber  
Telegrafenberg  
D/O-1561 Potsdam

#037 Institute for Tropospheric Research  
Permoserstr. 15  
Institut für Troposphären-Forschung (IfT)  
Permoser Straße 15  
D/O-7050 Leipzig

#038 Institute for Neurobiology  
Institut für Neurobiologie  
Brennekestrasse 6  
D/O-3090 Magdeburg

#039 Institute for Molecular Biotechnology  
Institut für Molekulare Bio-Technologie (IMB)  
Beutenberg Straße 11  
D/O-6900 Jena

#041 Laboratory for Spectroscopic Methods of Material Analysis  
Labor für spektroskopische Methoden der Stoff-Analyse, Berlin (LSMS)  
c/o Institut für Spektrochemie und Angewandte Spektroskopie (ISAS),  
B.-Kirchhoff-Str. 11,  
D/W-4600 Dortmund 1

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#042 Research Association Berlin  
Forschungsverbund Berlin, e.V.  
(an association of Blue Lists Institutes residing in East-Berlin)  
Herrn Falk Fabich  
Jäger Straße 22/23  
D/O-1086 Berlin

CHAPTER 7.4

FRAUNHOFER ESTABLISHMENTS  
(FRAUNHOFER EINRICHTUNGEN)  
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For a description of the Fraunhofer Society see above under 4.5.2.2.

#043 Fraunhofer Establishment for Applied Optics and Precision  
Mechanics Fraunhofer Einrichtung für Angewandte Optik und Feinmechanik  
Physikalisch-Astronomische Fakultät  
Friedrich-Schiller Universität  
Max-Wien-Platz 1,  
D/O-6900 Jena

#044 Fraunhofer Establishment for Applied Polymer Research  
Fraunhofer Einrichtung für Angewandte Polymer-Forschung  
Kantstr. 55,  
D/O-1530 Teltow-Seehof

#045 Fraunhofer Establishment for Electronic Beams and Plasma  
Techniques  
Fraunhofer Einrichtung für Elektronenstrahl- und Plasmatechnik  
Zeppelin Straße 7  
D/O-8051 Dresden

#046 Fraunhofer Establishment of Factory Performance and Automation  
Fraunhofer Einrichtung für Fabrikbetrieb und Automatisierung  
PO Box 124  
D/O-3010 Magdeburg

#047 Fraunhofer Establishment for Ceramic Technology and Sinter  
Materials  
Fraunhofer Einrichtung für Keramische Technologien und  
Sinterwerkstoffe  
Winterbergstrasse 28  
D/O-8027 Dresden

#048 Fraunhofer Establishment for Micro-Electronic Control Elements  
and Systems  
Fraunhofer Einrichtung für Mikroelektronische Schaltungen und Systeme  
Grenz Straße 28  
D/O-8060 Dresden

#049 Fraunhofer Establishment for Software and Systems Technique  
Fraunhofer Einrichtung für Software- und Systemtechnik  
Kur Straße 33  
D/O-1086 Berlin

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#050 Fraunhofer Establishment for Metal Forming and Heavy Machinery  
Fraunhofer Einrichtung für Umformtechnik und Werkzeugmaschinen Mommsen  
Straße 13  
D/O-8027 Dresden

#051 Fraunhofer Establishment for Material Physics and Lamination  
Technology  
Fraunhofer Einrichtung für Werkstoffphysik und Schicht-Technologie  
Helmholtzstrasse 20,  
D/O-8027 Dresden

#052 Fraunhofer Establishment for Secure Integrated Microsystems  
Fraunhofer Einrichtung für Zuverlässige Integrierte Mikrosysteme  
c/o Fraunhofer Gesellschaft  
Leonrod Straße 54  
D/W-8000 München 19

CHAPTER 7.5

FRAUNHOFER BRANCH LABS  
(FRAUNHOFER AUSSENSTELLEN)

=====

For a brief description of the Fraunhofer Society see under 4.5.2.2.

#054 Fraunhofer Branch Lab for Automation of the Circuit and Systems  
Projection

Fraunhofer Außenstelle für Automatisierung des Schaltkreis- und  
System-Entwurfs  
Haeckel Straße 20  
D/O-8027 Dresden

#055 Fraunhofer Branch Lab for Image Processing, Berlin

Fraunhofer Außenstelle für Bildverarbeitung, Berlin  
c/o Fraunhofer Gesellschaft  
Leonrod Straße 54  
D/W-8000 München 19

#056 Fraunhofer Branch Lab for Biochemical Ecotoxicology

Fraunhofer Außenstelle für Biochemische Ökotoxikologie  
Arthur-Scheubert-Allee 114-116  
D/O-1505 Bergholz-Rehbrücke

#057 Fraunhofer Branch Lab for Graphic Data Processing, Rostock

Fraunhofer Außenstelle für Graphische Datenverarbeitung, Rostock c/o  
Fraunhofer Arbeitsgruppe für Graphische Datenverarbeitung  
Wilhelminen Straße 7  
D/W-6100 Darmstadt

#058 Fraunhofer Branch Lab for Microstructure of Materials and Systems

Fraunhofer Außenstelle für Mikrostruktur von Werkstoffen und Systemen  
Weinberg 2  
D/O-4050 Halle

#059 Fraunhofer Branch Lab for Polymer Compounds

Fraunhofer Außenstelle für Polymer-Verbunde  
Kantstrasse 55  
D/O-1530 Teltow-Seehof

#060 Fraunhofer Branch Lab for Process Optimization, Berlin

Fraunhofer Außenstelle für Prozeß-Optimierung, Berlin  
c/o Fraunhofer-Institut für Informations- und Datenverarbeitung  
Fraunhofer Straße 1  
D/W-7500 Karlsruhe 1



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#061 Fraunhofer Branch Lab for Process Control Systems  
Fraunhofer Außenstelle für Prozeß-Steuerung  
Haeckel Straße 20  
D/O-8027 Dresden

#062 Fraunhofer Branch Lab for Powder Metallurgy and Compound  
Materials  
Fraunhofer Außenstelle für Pulver-Metallurgie und Verbund-Werkstoffe  
Helmholtz Straße 20  
D/O-8027 Dresden

#063 Fraunhofer Branch Lab for Robotic System Technology, Berlin  
Fraunhofer Außenstelle für Roboter-Systemtechnik, Berlin  
c/o Fraunhofer-Institut für Produktions-Anlagen und Konstruktions-  
Technik  
Pascal Straße 8-9  
D/W-1000 Berlin 10

#064 Fraunhofer Branch Lab for Acoustical Diagnostic and Quality  
Control  
Fraunhofer Außenstelle für akustische Diagnostik und Qualitäts-  
Sicherung  
Bautzener Straße  
D/O-8101 Rossendorf near Dresden;  
and also:  
D/O-8010 Dresden-Oberloschwitz

#065 Fraunhofer Branch Lab for Air Chemistry  
Fraunhofer Außenstelle für Luftchemie  
Rudower Chaussee 5  
D/O-1199 Berlin

CHAPTER 7.6

MAX PLANCK INSTITUTES AND WORKING GROUPS  
=====

For a brief description of the Max-Planck Society see above under 4.5.2.1.

#067 Max Planck Institute for Micro Structural Physics (alternative: Micro Structure Research, Preexisting work title)  
Max-Planck Institut für Mikrostruktur-Physik  
Postfach 250  
Weinberg 2  
D/O-4020 Halle

#068 Max-Planck Institute for Colloid and Interfacial Research  
Max-Planck Institut für Kolloid- und Grenzflächen-Forschung  
Rudower Chaussee 5, Haus 9.9.  
D/O-1199 Berlin-Adlershof  
and also:  
Kant Straße 55  
D/O-1530 Teltow-Seehof

#070 Max-Planck Working-Group "Quantum Chemistry"  
Max-Planck Arbeitsgruppe "Quantenchemie" at the Humboldt-Universität  
Rudower Chaussee 5  
D/O-1199 Berlin-Adlershof

#071 Max-Planck Working-Group "Theory of Semiconductors with Reduced Dimensions"  
Max-Planck Arbeitsgruppe "Theorie dimensionsreduzierter Halbleiter"  
at the Humboldt Universität Berlin  
Hausvogteiplatz 5-7  
D/O-1086 Berlin

#072 Max-Planck Working-Group "CO<sub>2</sub> - Chemistry"  
Max-Planck Arbeitsgruppe "CO<sub>2</sub>-Chemie" at the Friedrich-Schiller Universität  
Lessing Straße 12  
D/O-6900 Jena

#074 Max-Planck Working-Group "Theoretical Multi-Particle Systems Max-Planck Arbeitsgruppe "Theoretische Vielteilchen-Systeme" at the Universität Rostock  
Universitäts Platz 3  
D/O-2500 Rostock

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#075 Max-Planck Working-Group "Regulation of DNA-Replication for  
Bacillus Subtilis"

Max-Planck Arbeitsgruppe "Regulation der DNA-Replikation bei bacillus  
subtilis" at the Friedrich-Schiller-Universität Jena  
Fürstengraben 1  
D/O-6900 Jena

#076 Max-Planck Working-Group "Enzymology of the Peptide Bond"

Max-Planck Arbeitsgruppe "Enzymologie der Peptidbindung" at the  
Martin-Luther Universität Halle - Wittenberg  
Weinberg Weg 16  
D/O-4050 Halle

#078 Max-Planck Working-Group "Physics and Chemistry of Interstellar  
Dust in Star Formations"

Max-Planck Arbeitsgruppe "Physik und Chemie des interstellaren  
Staubes in Stern-Entstehungs-Gebieten" at the Friedrich-Schiller  
Universität  
Max-Wien Platz 1  
D/O-6900 Jena

#079 Max-Planck Working-Group "Gravitational Theory"

Max-Planck Arbeitsgruppe "Gravitations-Theorie" at the  
Friedrich-Schiller Universität  
Max-Wien Platz 1  
D/O-6900 Jena

#080 Max-Planck Working-Group "Molecular and Cellular Physiology"

Max-Planck Arbeitsgruppe "Molekulare und zelluläre Physiologie" at the  
Friedrich-Schiller Universität  
Medizinische Akademie Erfurt  
D/O-5000 Erfurt

#081 Max-Planck Working-Group "Non-classical Radiation"

Max-Planck Arbeitsgruppe "Nichtklassische Strahlung" at the Humboldt  
Universität Berlin  
Rudower Chaussee 5, Haus 10.16  
D/O-1199 Berlin-Adlershof

D083 Max-Planck Working-Group "Mechanics of Heterogeneous Solid

Bodies" Max-Planck Arbeitsgruppe "Mechanik heterogener Fest-Körper" at  
the Technische Universität Dresden  
Hallwachs Straße 3  
D/O-8027 Dresden

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#085 Max-Planck Working-Group "Cell Division Regulation and Gene Substitution"

Max-Planck Arbeitsgruppe "Zellteilungs-Regulation und Gen-Substitution" at the Humboldt Universität  
Max-Delbrück Haus  
Robert-Rößle Straße 10  
D/O-1115 Berlin-Buch  
Humboldt Universität Berlin

#086 Max-Planck Working-Group "Modulation of the Signal Control of Growth Factors"

Max-Planck Arbeitsgruppe "Modulation der Signal-Übertragung von Wachstums-Faktoren" at the Friedrich-Schiller Universität  
Löbder Straße 3  
D/O-6900 Jena

#087 Max-Planck Working-Group "Pharmacological Hemostaseology"

Max-Planck Arbeitsgruppe "Pharmakologische Hämostaseologie" at the Friedrich-Schiller Universität  
c/o Institut für Pharmakologie und Toxikologie  
Medizinische Akademie Erfurt  
Mordhäuser Straße 74  
D/O-5010 Erfurt

#088 Max-Planck Working-Group "X-Ray Diffraction of Laminal Systems"

Max-Planck Arbeitsgruppe "Röntgen-Beugung an Schicht-Systemen" at the Humboldt Universität  
Hausvogtei Platz 5 - 7  
D/O-11986 Berlin

#089 Max-Planck Working-Group "Theory of Complex and Correlated Electron Systems"

Max-Planck Arbeitsgruppe "Theorie komplexer und korrelierter Elektronen-Systeme" at the Technische Universität Dresden  
c/o Institut für Festkörper-Physik und Werkstoff-Forschung  
Helmholtz Straße 20  
D/O-8027 Dresden

#090 Max-Planck Working-Group "Failure Tolerant Calculation"

Max-Planck Arbeitsgruppe "Fehlertolerantes Rechnen" at the Universität Potsdam  
Kur Straße 33  
D/O-1086 Berlin

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#091 Max-Planck Working-Group "Algebraic Geometry and Number Theory"  
Max-Planck Arbeitsgruppe "Algebraische Geometrie und Zahlentheorie"  
at the Humboldt Universität  
Mohren Straße 39  
D/O-1086 Berlin

#092 Max-Planck Working-Group "Partial Differential Equation and  
Complex Analysis"  
Max-Planck Arbeitsgruppe "Partielle Differential-Gleichungen und  
komplexe Analysis" at the Universität Potsdam  
Mohren Straße 39  
D/O-1086 Berlin

#093 Max-Planck Working-Group "Non-Linear Dynamics (in Astrophysics)"  
Max-Planck Arbeitsgruppe "Nichtlineare Dynamik (in der Astro-Physik)"  
at the Universität Potsdam  
Stubenrauch Straß 26  
D/O-1590 Potsdam

#094 Max-Planck Working-Group "X-Ray Optics"  
Max-Planck Arbeitsgruppe "Röntgen-Optik" at the Friedrich-Schiller  
Universität  
Max-Wien Platz 1  
D/O-6900 Jena

#095 Max-Planck Working-Group "Time Release Spectroscopy"  
Max-Planck Arbeitsgruppe "Zeitaufgelöste Spketroskopie" at the  
Universität Leipzig  
Permoser Straße 15  
D/O-7050 Leipzig

#096 Max-Planck Working-Group "Complex Catalysis"  
Max-Planck Arbeitsgruppe "Komplex-Katalyse" at the Universität  
Rostock  
Buchbinder Straße 5 - 6  
D/O-2500 Rostock

#097 Max-Planck Working-Group "Asymmetric Catalysis"  
Max-Planck Arbeitsgruppe "Asymmetrische Katalyse" at the Universität  
Rostock  
Buchbinder Straße 5 - 6  
D/O-2500 Rostock

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#098 Max-Planck Working-Group "Synthesis, Structure, and Nature of Liquid Crystalline Systems"

Max-Planck Arbeitsgruppe "Synthese, Struktur und Eigenschaften von flüssig-kristallinen Systemen" at the Martin-Luther Universität Halle-Wittenberg

Haus der Francke'schen Stiftungen

D/O-4020 Halle

temporary address:

Dr. Alfred Saupe

1958 Brookview Drive

Kent OH 44240, USA

#101 Branch Institute Berlin-Adlershof of the Max-Planck Institute for Extraterrestrial Physics, Munich

Aussenstelle Berlin-Adlershof des Max-Planck Institutes

f.Extraterrestrische Physik, München

Rudower Chaussee 5

D/O-1199 Berlin

#102 Branch Institute Berlin of the Max-Planck Institute for Plasma Physics, Munich

Aussenstelle Berlin des Max-Planck Institutes für Plasmaphysik, München

Mohren Strasse 40/41

D/O-1086 Berlin

CHAPTER 7.7

REMARKS ON UNIVERSITY RESEARCH INSTITUTES  
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As indicated elsewhere in this REPORT, most innovative research in the former GDR had been shifted from the universities into Academy institutes which were under strict and broad control not only by the Academy but also often by individual institute directors. It is, however, wrong to assume that research did not also continue in university institutes, albeit under certain restrictions which were not clearly defined. Following the principle of the unity between teaching and research, the indicated trend has stopped and may slowly be reversed; but this evolution will take much time and may never be fully completed.

To report on the research situation at the universities in the five new länder is even more complicated than a report on the non-university research institutes, for several reasons:

The "evaluation" by the Wissenschaftsrat proceeded much more slowly for the universities and is not even completed at the time of this writing. Obviously, it also has to be done in a different way: certainly with very much more caution and with more than due respect versus the often traditional institutions and the persons in them in order not to hurt what one intends to build up: academic villages with free and responsible inhabitants where the free spirit of investigation governs. Therefore, it is not yet clear in which way the development will go, and an attempt to report in any detail may be grossly outdated already when this will be printed.

Within a rather broad frame, the individual research task at a university institute can change more and more often than at a typical research institute outside the university world. Usually, a new director for a university institute brings a change in the direction of research; and even each new graduate doing his thesis work at the institute may cause a change.

Sometimes, directors of university institutes do not feel very friendly versus the idea to give the present or future research trend at their institute to the public. There are good reasons for this attitude and they should not be hurt.

Therefore, the author intends to report - in part C - only in broad form about the university research in the five new länder and East-Berlin. He will, however, also provide - as an example which, as time progresses will remain valid only as a possible example and not as a true report - a survey on present research tasks at one of the leading universities, provided to him by a special effort of some offices of that university.

Here, in chapter 7.7. of the present REPORT, only a list of universities in the five new länder and East-Berlin will be given, restricted to full and technical universities in the common international sense. This restriction has been chosen because the actual status and future of some of the many other types of "Hochschulen" does not seem to be certain as yet; it should however been noted that scientific research may and will also be done at these. - The source for this list is "Deutscher Hochschulführer" 54th edition, Stuttgart, Raabe, 1992; for some addresses also "Taschenbuch des Öffentlichen Lebens (see chapter 8.1 of this REPORT). - The universities are numbered by four-digit numbers with the last two digits being zeros, preceded by a pound-sign (#). - For the indicated uncertainty of town codes or phone numbers, see chapter 8.2 of this REPORT.

#### Berlin (East-)

-----

#1100 Humboldt-Universität zu Berlin, founded 1810  
(formerly Friedrich-Wilhelms Universität)  
Unter den Linden 6  
D/O-1086 Berlin  
Telephone: +37 (2) 2093-2100  
Telefax: +37 (2) 2093-2770

#### Brandenburg

-----

#2100 Universität Potsdam, founded 1991  
(formerly Brandenburgische Landeshochschule Potsdam)  
Am Neuen Palais 10  
D/O-1571 Potsdam  
Telephone: +37 (33) 91-0790  
Telefax: +37 (33) 92-163

#2200 Europäische Universität "Viadrina" Frankfurt (Oder)  
(a traditional but discontinued university, refounded 1991)  
Große Scharnhorst Straße 59  
D/O-1200 Frankfurt (Oder)  
Telephone: +37 (335) 364-2200  
Telefax: +37 (335) 364-2305

#2300 Technische Universität Cottbus, founded 1991  
(formerly Hochschule für Bauwesen)  
Postfach 102/1  
Karl Marx Straße 17  
D/O-7500 Cottbus  
Telephone: +37 (59) 69-0  
Telefax: +37 (59) 69-2721



Mecklenburg-Vorpommern  
-----

#3100 Ernst-Moritz-Arndt Universität Greifswald, founded 1446  
Dom Straße 11  
D/O-2200 Greifswald  
Telephone: +37 (822) 63-0  
Telefax: +37 (822) 63-311

#3200 Universität Rostock, founded 1419  
Universitäts Platz 1  
D/O-2500 Rostock  
Telephone: +37 (81) 369-0  
Telefax: +37 (81) 34287

#3300 Technische Hochschule Wismar  
Postfach 103  
Philipp-Müller Straße  
D/O-2400 Wismar  
Telephone: +37 (824) 53-0  
Telefax: +37 (824) 53-383

Sachsen  
-----

#4100 Universität Leipzig, founded 1409  
Augustus Platz 10-11  
D/O-7010 Leipzig  
Telephone: +37 (41) 719-0  
Telefax: +37 (41) 20-0325 or 28-2435

#4200 Technische Hochschule Leipzig, founded 1977  
Karl Liebknecht Straße 132  
D/O-7030 Leipzig  
Telephone: +37 (41) 3928-0  
Telefax: +37 (41) 3928-456

#4300 Technische Universität Dresden, founded 1828  
Mommsen Straße 13  
D/O-8027 Dresden  
Telephone: +37 (51) 463-0  
Telefax: +37 (51) 471-0294 or 471-294 (uncertain which)

#4400 Technische Universität Chemnitz, founded 1963  
Postfach 964  
Straße der Nationen, 62  
D/O-9010 Chemnitz  
Telephone: +37 (71) 668-0  
Telefax: +37 (71) 668-342

#4500 Bergakademie Freiberg, founded 1765  
Postfach 47  
Akademie Straße 6  
D/W-9200 Freiberg (Sachsen)  
Telephone: +37 (35) 51-2550, -2551  
Telefax: +37 (35) 51-2185

#4600 Hochschule für Verkehrswesen "Friedrich-List", founded 1952 (a  
Technical Institute on University-Level)  
Friedrich-List Platz 1  
D/W-8010 Dresden  
Telephone: +37 (51) 462-0  
Telefax: +37 (51) 462-2702, -3298

#4700 Medizinische Akademie Dresden, founded 1954  
Fletscher Straße 74  
D/O-8019 Dresden  
Telephone: +37 (51) 458-0

#4800 Technische Hochschule Zittau, founded 1969  
Postfach 261  
Theodor Körner Allee 16  
D/O-8800 Zittau  
Telephone: +37 (522) 61-0 (town code uncertain)  
Telefax: +37 (522) 3231

#4900 Technische Hochschule Zwickau,  
Postfach 35  
Dr.Friedrichs Ring 2a  
D/O-9541 Zwickau  
Telephone: +37 (74) 823-0  
Telefax: +37 (74) 823-223

Sachsen-Anhalt  
-----

#5100 Martin-Luther Universität Halle-Wittenberg,  
founded Wittenberg 1502, Halle 1694, united 1817  
Universitäts Platz 10  
D/O-4020 Halle (Saale)  
Telephone: +37 (46) 832-0 (town code uncertain)  
Telefax: +37 (46) 29513 (town code and number uncertain)

#5200 Technische Universität "Otto-von-Guericke", Magdeburg, f.1955  
Postfach 4120  
Universitätsplatz 2  
D/O-3010 Madgeburg  
Telephone: +37 (91) 592-0  
Telefax: +37 (91) 592-156

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#5300 Technische Hochschule "Carl Schorlemer", Merseburg, founded 1954  
Geusaer Straße

D/O-4200 Merseburg

Telephone: +37 (442) 46-0 (town code uncertain)

Telefax: +37 (442) 46-2370

#5400 Technische Hochschule Köthen, founded 1891

Bernburger Straße 52-57

D/O-4370 Köthen

Telephone: +37 (445) 67-0 (town code uncertain)

Telefax: +37 (445) 67-2190

===will be discontinued after 30 Sept 1993=====

#5500 Medizinische Hochschule Magdeburg, founded 1954

Leipziger Straße 44

D/O-3090 Magdeburg

Telephone: +37 (91) 67-0

Telefax: +37 (91) 67-2749

#### Thüringen

-----

#6100 Friedrich-Schiller Universität Jena, founded 1557

Fürsten Graben 1

D/O-6900 Jena

Telephone: +37 (78) 82-0

Telefax: +37 (78) 82-22343, -22345

#6200 Technische Hochschule Ilmenau, founded 1953

Postfach 327

Max-Planck Ring 14

D/O-6300 Ilmenau

Telephone: +37 (31) 74-0 (town code uncertain)

Telefax: +37 (31) 74-718

#6300 Medizinische Akademie Erfurt, founded 1954

Nordhäuser Straße 74

D/O-5010 Erfurt

Telephone: +37 (61) 79-00

Telefax: +37 (61) 79-2010

#6400 Hochschule für Architektur und Bauwesen, founded 1860

(Institute for Architecture and Civil Engineering, university level)

Postfach 541

Geschwister-Scholl Straße 8

D/O-5300 Weimar

Telephone: +37 (621) 73-0 (town code uncertain)

Telefax: +37 (621) 61710 (number and town code uncertain)

## CHAPTER 7.8

### REMARKS ON OTHER RESEARCH INSTITUTIONS

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Institutions which have as their main task to do basic scientific research in the natural sciences and engineering but which do not belong to any of the groups listed above under chapters 7.2 through 7.7 are either private (mostly within industry) or may be counted as "Ressort-Forschungs-Einrichtungen", i.e. as institutions owned and run by government agencies. They are often bound to rather narrow tasks closely related to the goals of the cognizant ministry and therefore of lesser interest in this report. An obvious exemption from this are the environmental research institutions which often produce results of general, even global, interest. In the five new länder we find Ressort-Forschungs-Einrichtungen dealing with environmental research under the Ministry of Transport and, in particular, the Weather Service (Deutscher Wetterdienst). Therefore, in this chapter, we shall list them.

In addition, it seems to be possible that for the urgent clean-up of the heavily polluted environment in the former GDR important government-run institutions will emerge which may produce scientific results of general interest. At present, we do not yet know any and therefore cannot report on them.

It should not be overlooked that of the agencies and organizations listed above in Main Chapters 4 and 5, some are also actively involved - or may be so from time to time - in research tasks.

#### RESEARCH INSTITUTES OF THE GERMAN WEATHER SERVICE IN THE 5 NEW LÄNDER:

#201 Meteorological Observatory Potsdam of the German Weather Service.  
Meteorologisches Observatorium des Deutschen Wetterdienstes.  
Telegrafenberg  
D/O-1561 Potsdam.

#202 Meteorological Observatory Lindenberg of the German Weather Service  
Meteorologisches Observatorium Lindenberg des Deutschen Wetterdienstes  
D/O-1213 Lindenberg, Kreis Beeskow, Land Brandenburg.

#301 Astronomical Observatory Tautenburg  
Astronomisches Observatorium Tautenburg  
D/O-6901 Tautenburg/Thüringen

#401 Institute for Higher Physical Technologies  
Institute für Physikalische Hoch-Technologien  
Helmholtz Weg 4  
D/O-6900 Jena

#402 Facility for Materials Testing and Testing in Construction,  
Leipzig  
Materialforschungs- und Prüfungsanstalt für Bauwesen Leipzig  
Richard Lehmann Straße 19  
D/O-7030 Leipzig

\$403 Association for the Technology and Analysis of Nuclear  
Procedures, Rossendorf  
Verein für Kernverfahrenstechnik und Analytik  
Rossendorf  
Postfach 19  
D/O-8051 Dresden

#404 Institute for Mechatronics  
Institut für Mechatronik  
Reichenheimer Straße 88  
D/O-9010 Chemnitz

#405 Research Institute "Kurt Schwabe", Meinsberg  
Forschungsinstitut "Kurt Schwabe" Meinsberg  
Postfach 73  
D/O-7305 Waldheim

#501 Center f.Stereo-Selective Organic Synthesis (ZSOS)  
Zentr.f.Stereoselektive Organische Synthese (ZSOS)  
Rudower Chaussee 5  
D/O-1199 Berlin-Adlershof

#502 Center for HeterogeneCatalysis (ZHK)  
Zentrum für Heterogene Katalyse (ZHK)  
Rudower Chaussee 5  
D/O-1199 Berlin-Adlershof

#503 Center for Anorganic Polymers (ZAP)  
Zentrum für Anorganische Polymere (ZAP)  
Rudower Chaussee 5  
D/O-1199 Berlin-Adlershof

#504 Center for Macromolecular Chemistry (ZMC)  
Zentrum für Makromolekulare Chemie (ZMC)  
Rudower Chaussee 5  
D/O-1199 Berlin-Adlershof

MAIN CHAPTER 8

A P P E N D I C E S  
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contains:

- 8.1. General Information on Germany
- 8.2. Hints for Travel in the New Länder
- 8.3. Titles and Ranks of German officials and academics

A Special Addition is provided under the title

IDEAS ON THE POLITICAL BACKGROUND.

It has been written by the same authors and in context with this REPORT but is not intended to be part of it. If one expects to be involved in discussions on politics, this Special Addition may be of some help although it is, of course, not more than the private opinion of the authors. It is available on request.

8.1. GENERAL INFORMATION ON GERMANY  
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The following publications may be helpful for visits in Germany:

"Facts about Germany"  
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Published by the "Presse- und Informations-Amt" of the Federal Government in Bonn, Department IVA1, telephone +49 (228) 208-4110. This book will be available in a new edition including the new länder in summer 1992 and can then be obtained, free of charge, from the Presse-Referat of the German Embassy in Washington DC, telephone: (202) 298-4251. It offers detailed information in the following chapters: Country, people, history; State, politics, the law; Economics; Society. welfare, leisure; education, science, culture; with a bibliography and an index. More than 400 pages, 18 x 11.5 cm; many diagrams and pictures in color. In English.

"These Strange German Ways"  
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Published by Atlantik-Brücke e.V., in their Hamburg office, to be asked for under telephone +49 (40) 59-66-18; 16th edition, 135 pp, \$3.00 (higher volume-discounts). It is an entertaining guide to German facilities, customs and traditions, written to help the visitor from overseas to feel comfortable when traveling in Germany. In English.

"Meet United Germany, Perspectives"  
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Published by FRANKFURTER ALLGEMEINE ZEITUNG, INFORMATION SERVICES, and the ATLANTIK-BRÜCKE.  
1991. 280 pp. Available from (the approximate price for both volumes is DM 50.00):

Frankfurter Allgemeine Zeitung  
Informationsdienste  
Hellerhof Straße 2-4  
D/W-6000 Frankfurt / Main 1.

The volume "Perspectives" is described in its introduction as follows: "The book contains 22 chapters on a wide range of topics from the recent history of Germany divided to the future foreign policy of Germany united. Each chapter, complete in itself, has been written by an expert in the field; many of the authors are themselves in influential positions and indeed, some are key players in the shaping of the new Germany. Others are professional observers with years of Germany-watching experience. Thus, all of the contributions are highly individual blends of the objective and the subjective. The whole is a mosaic, a colorful picture of a country in a particular colorful phase of its history."

"Meet United Germany, Handbook 1991/92"  
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Published by FRANKFURTER ALLGEMEINE ZEITUNG, INFORMATION SERVICES, and the ATLANTIK-BRÜCKE.

1991. 184 pp. Available from (for price see above):

Frankfurter Allgemeine Zeitung  
Informationsdienste  
Hellerhof Straße 2-4  
D/W-6000 Frankfurt / Main 1.

The volume "Handbook 1991/92" is described in the introduction to volume "Perspectives" as follows: "Handbook 1991/92 is a compilation of up-to-date useful information for those intending to visit Germany on business. It covers everything from the banking system to the most recent changes in corporate and personal taxation; from an overview of the most important industries to a run-down of Germany's top 100 companies; from a property report to incentives to invest in the new länder. It contains a section on transportation, as well as portraits of the individual länder and the most important cities. It also provides valuable sources and pointers for those seeking more detailed information in specific areas."

"Taschenbuch des Öffentlichen Lebens, Deutschland, 1991/1992"  
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by Albert Oeckl; (41st edition; publisher: Festland Verlag, Basteistr. 88, D/W-5300 Bonn 2, telephone: +49 (0228) 36-20-21; 1452 pages, 15 x 10 cm). It provides information on all branches of public life in Germany; names, addresses and telephone, often with brief descriptions. The index contains 10,000 organizations and agencies, the name index lists 17,000 persons. In German, price about DM 110.00. There are similar but much smaller editions for individual länder.

The articles by Marc Fisher in THE WASHINGTON POST.  
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Marc Fisher is the Chief of the Berlin Bureau of THE WASHINGTON POST, moving there from Bonn in 1991. Probably in part because of his academic training as a historian, Fisher is able to avoid pitfalls of journalism. In the opinion of the authors of this REPORT, his articles are full of insight and awareness of the general and many special situations; they are fundamentally critical and eminently readable. For Americans intending to make business trips to, or work in Germany, we recommend, especially, "Deutsche Doze. The Leisurely Lives of the Germany's Worker Bees", THE WASHINGTON POST 115:150:C1/C4; 03 May 1992. The article deals with the attitude of the Germans versus work and leisure. In the same number, on p.F1/F8 we find Fisher's article "East Side Story. Meet the Hotz Family, They Went to West Germany to Taste Freedom. And Found a Bitter Pill." - Copies of these and a few others of his articles are available from the authors.



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## 8.2. HINTS FOR TRAVELING IN EAST-GERMANY

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There are a few minor problems to be mentioned here. Names of towns, streets, organizations, and institutions have been changed in the last two years. This process continues. Hardly any of the institutes has deliberately chosen an "official" English translation for its name; several ad hoc translations of the same name may give different results and thereby create confusion. In the present report, we use both English and German names. That may help clarity, it also may help correspondence. Contrary to the situation in the Western länder of the FRG, the knowledge of English is less common in the Eastern länder. There, all had to study Russian. A few had English in school, some - mainly scientists - learned English on their own.

When planning a trip, some potential difficulties should be kept in mind. Planning for cross-country travel by car may involve long detours because of road repair work. The detours are not always clearly marked; "getting lost" is a frequent experience. There can be long distances between filling stations. Trains may be late; again repair work is often the cause.

Especially important are very early hotel reservations (months, in particular for weekends). That is necessary but not always easy because of poor telephone connections (now being replaced as fast as possible). When there, we learned of a West-German travel agency which claims to be expert in handling hotel reservations in the five new länder. Telephone discussions with them gave the impression of efficiency, but we do not have any own experience with their reservation services\*.

To locate specific addresses in the cities may be problematic: maps of cities may show names which have since been replaced, or addresses may refer to old names which are not found on new maps. We encountered all these difficulties but in most cases local people proved helpful. Maps from the GDR times usually have no scales.

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\*) Hotel Reservation Service  
Drusus Gasse 7 - 11  
D/W-5000 Köln 1  
Germany  
Telephone: +49 (221) 2077-0  
Telefax: +49 (221) 2077-666  
Telex: 8881151 hrs d  
Direct e-mail from USA ("Videotex"): in preparation.

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There are also problems with the telephone system. The system of the GDR was not very effective. After re-unification, the West-German Telekom preferred to install new lines (of a very modern type) instead of trying to completely overhaul the old system. That is progressing quickly, at first trying to serve the economic community; but it may take a few more years before a complete improvement is to be seen. A second problem is the fact that the system of town codes in both parts of Germany were set up independently of each other with the result that the same town code may (and often does) occur for one West- and one East-German town. Therefore, the international code for West-Germany is +49, for East-Germany +37. In East-Germany an additional, rather curious problem exists: The town codes in the former GDR depended, in some cases, on the locality from where a call was made. People in the West, unaware of this, took a given town code usually as generally valid and used it in their lists. Comparing different lists, therefore, may indicate different town codes for the same town. Whenever possible, we used the town code which would be valid for calls from the West. If problems are encountered, resort to the telephone operator's help. - Another point may be of help when using the telephone: both in West- and in East-Germany, the number of digits in a local telephone number is varying from maybe only 2 (in a little village) to 8, and they are written usually without a hyphen between digits. If, in official phone books etc., a hyphen appears with a 0 or 1 or 01 behind it, it indicates that the number is that of an agency or corporation or company, etc. and the 0, 1 or 01 connects the caller to the switch board. If the caller knows the desired extension, the 0, 1 or 01 may be replaced by that extension (so-called "Durchwahl" - direct dialing).

A similar problem exists with the postal Zip-codes, the basics were different: in West-Germany one zip-code is valid for a whole town even for a large one, so, postal zones must be used in addition (written after the name of the town). In the GDR, the postal zones were incorporated into the zip-codes, so each zip-code there is valid only for one part of a big town. After re-unification, it was proposed to precede a West-German zip-code with a W, and East-German with an O. In this REPORT, we followed that proposal, but in Germany, the W is often omitted, and only the O is used. The correct way for international mail is to precede the zip-code first with a D for Germany (Deutschland) and then, after a slash (/) with W or O, hyphen (-), zip-code, name of town (and in West-Germany, postal zone if applicable).

It is certain that as quick as possible, both the town-code systems for the telephone and the zip-code systems will be unified for both parts of Germany. That means new numbers for everyone, in West- and in East-Germany. There is an indication that the new telephone codes may be introduced in the fall of 1992; that will not reduce the potential for confusion during the transition period, beginning now.

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As a side-remark: the same exists for the number systems for streets and for railroad lines (e.g., in time tables). The problem for the streets is the smaller one because for old streets in most cases the numbers were continued which had been introduced before World War II, in both parts of Germany. That is mostly not the case for railroad-line numbers, zip-codes and phone town-codes.

### 8.3. TITLES AND RANKS OF GERMAN CIVIL SERVANTS AND ACADEMICS

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#### 8.3.1. Civil Servants

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In the Federal Government as well as in the Länder Governments, civil servants in Germany have job titles which are used in written material, and can be used, especially if a new contact is made, in oral addresses as well. They precede any academic title which may exist, too, e.g., "Ministerialrat Dr. H.A. Müller". Sometimes, attempts are being made to compare these titles with military ranks, but there is no official connection. Any private connection is bound to be imprecise, in part because the real position of a civil servant not only depends on his title but also on his job. Also, the number of civil service ranks is different from the number of military ranks. The approximate comparisons presented in the table below are based on our discussions with the U.S. State Department, the Protocol of the German Foreign Office, and the Protocol of the German Ministry of Defense.

In the U.S., there is not only the GS or GM scheme and the SES scheme, there are others as well (e.g. FP, FO, FS), not listed here. In Germany, too, in addition to the titles of civil servants quoted here, there are other titles, for example in the German Foreign Office (e.g., "Legationsrat").

The uppermost civil servant in a German ministry except the Minister him-(or her-)self is a Staatssekretär. There may be one or a few, directly under the Minister. Not counting them, we list the titles from the top on downwards:

Title	Abbrev.	Military Rank	U.S. Civil Svc.
Ministerialdirektor	MDir	Lt.Gen.	GS-18, SES-6
Ministerialdirigent	MDirig	Brig.Gen.	GS-16, SES-1
Ministerialrat	MRat	Colonel	GS-15
Leitender Regie- rungsdirektor	Lt.RDir	Colonel	GS-15
Regierungsdirektor	RDir	Lt.Col.	GS-14/13
Oberregierungsrat	ORR	Lt.Col.	GS-14/13
Regierungsrat	RR	Major	GS-12

Equivalent (in the sense of this table) with "Regierungsdirektor" is "Baudirektor", and with "Regierungsrat" is "Amtsrat".

### 8.3.2. Academic Titles

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We are not dealing with the names of positions or jobs in the German Academic or Scientific Environment. They are complicated and have changed several times not too long ago; and in our communications they are probably of lesser interest than the personal academic titles.

In the German environment, personal titles are more often given and used than in the American one. Academic titles are given by universities and other schools on the same level (e.g., technical universities, "Technische Hochschulen"), which are immediately accessible to any one who has passed the 12 years of German school and finished it with a "Reifezeugnis" (also called Abitur); others can be admitted under certain conditions. After completion of a full study, a title which begins with "Dipl." (Diplom) can be acquired by a written thesis and an examination. Most often it appears as "Dipl.Ing." = Diplom-Ingenieur, but there are many others, e.g. Dipl.Phys. or Dipl.Met. for a physicist or meteorologist, respectively\*. Medical schools do not give a Diplom-Title.

The Dipl. Title is always used in written addresses but generally not orally. It is considered to be equivalent to an American Master's degree.

Except for medical or dental careers, and maybe some others, the Dipl.-Title is nowadays the normal pre-condition for the admission to a Doctor's degree pursuit. In their requirements, the Doctor's degrees are similar to the American ones but they are written differently. This title always begins with a "Dr." which is followed by an abbreviation of the Latin description of the scientific branch, for example:

Dr.phil. = philosophy and some other humanities  
Dr.rer.nat. or Dr.sci.nat. = natural sciences  
Dr.iur. = jurisprudence  
Dr.med. = medical  
Dr.med.dent. = dental,

and so on, but

Dr.-Ing. for Doctor-Engineer  
which many think is more difficult to acquire than the other doctor degrees.

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\*) Not very long ago, colleges of a somewhat lower level (accessible after less years at school), which formerly provided the title "Ingenieur", now also have the right to give the title "Diplom-Ingenieur" [whereupon some Dipl.-Ing's of a Technical University added a (TH) or something similar to their title].

-3-

The routine way to become eligible as a university-professor was in Germany the "Habilitation" which required another thesis and a lecture in front of a critical auditorium. This is still so, but since about 60 years, persons having passed the Habilitation have the right to add the word "habil." to their doctor's title. In written addresses, the full doctor's title is used, plus the "Herr" or "Frau"; for example:

Herr Dr.iur.W.Müller  
Frau Dr.rer.nat.habil.G.Lehmann,

and if the person is appointed a professor, the doctor's titles are still added:

Herr Prof.Dr.med.habil.S.Schmidt.

If, for example in a report of a meeting, a person is quoted more than once, the full title may be used only for the first quotation. Of course, in scientific references etc. no title is used.

Orally, the expression is much shorter: Herr Doktor Müller, Frau Doktor Lehmann, Herr Professor Schmidt.

Military officers with an academic title use it after their military rank, for example: Herr Kapitän zur See Dr. Schröder, for a Navy Captain with a doctor's degree. - Aristocratic titles still exist in Germany, they are combined with academic ones as, e.g., in: Frau Dr. Marion Gräfin Dornburg.

Formerly, all German universities were led by a "Rektor". He was one of the leading professors of that university, getting elected as Rektor for a period of one or a few years. In this office, he had the additional title "Magnifizenz" (with some complicated rules for addressing him attached). That title came out of use in this century, but is now being applied again at some universities in East-Germany (but without the complicated rules). Some West-German universities de-established the position of Rektor and applied a President system similar to the American one.

The survey given here is not valid for Austria and Switzerland.

SPECIAL ADDITION:

ATTEMPT TO CLARIFY THE POLITICAL BACKGROUND  
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In 1945 and thereafter, the intention of the U.S.S.R. occupation force to introduce their political system into the occupied territories (and thereby their own dominance over them), was helped by the fact, that in Germany the Hitler regime had lasted only twelve years, too short a time to eradicate the Marxist concept in the mind of millions of Germans. Those of these millions who believed in Marxism, may not have liked the occupation by a foreign power but could not help welcoming the new political direction. Others of them, who knew about the Marxist ideas but were not certain whether they truly wanted them realized, continued to see the democratic goals in the light of the French Revolution; knowing practically nothing about the American Revolution.

For an understanding of the present political situation in the area of the former GDR it is necessary to be aware of the fact that the difference between the democratic state as derived from the French revolution and Marxism, is - at its basis - smaller than the difference between the "French" idea of the democratic state and the one derived from the American revolution. We may expect that many of the Germans in these Eastern parts of the Republic, after their experience that Marxism did not work, return to the message of the French revolution. This revolution had been celebrated by the Marxists as a precursor to their weltanschauung and is therefore more familiar to them than the American convictions, indeed, they know next to nothing about the American Revolution of 1776. Therefore, there remains a ground swell of misunderstanding in the encounter between Americans and these Germans, which now and then will rise up to the surface. It is mostly up to the American part of such encounters to understand and, when appropriate, to explain the difference. Explanations may be tried on the following basis:

The difference between the American and the French Revolutions springs from different interpretations of the concepts of freedom and of equality and of the relation between them. American scholars, of course, always knew the French interpretation. French scholars, at least since de Tocqueville, knew about the American interpretation. The essential difference is in the fact that the American interpretation grew out of, or at least was supported by, the uniquely American historical experiences with the ideas and the practices of these two concepts. These experiences, from 1607 and 1620 on through at least two and a half centuries, were automatically shared by almost all Americans



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from their childhood on. Such common and direct experience, naturally creating a solid foundation for the concepts of freedom and equality, is missing in Europe.

For Americans in those years, complete individual freedom was only a short geographic distance away and was always linked to complete responsibility. Also, the habit of giving to every newcomer the same amount of land, naturally led to the experience that equal starting conditions do not produce equality in the result.

The American interpretation is best formulated in George Mason's Virginia Bill of Rights on June 1776 in the statement that all men are born (or, by their nature) equally free. The French interpretation is expressed in the most radical way in the Déclaration des Droits de l'Homme of 1793, where the equality of men is the main principle, compared to it freedom plays a secondary role.

Even in our days, the differences may be circumscribed about as follows: In the American thinking, freedom is essentially linked to responsibility; this link can be found in some books and papers of European thinkers but remains in the minds of almost all European people a hypothesis at best. In the American thinking, equality is considered as the goal for the opportunities or for providing starting conditions, while Europeans tend to think that equality between all people throughout their life should be the goal of the main political efforts. It is not very difficult to see that the European interpretations of freedom and equality contribute to the relative easiness with which societies believing in these interpretations slip into dictatorships - already Duguit has pointed to this in 1906. It is also not difficult to show that these interpretations tend to accustom people to the expectation that the government will solve their most pressing problems. This attitude has been implanted into lifelong expectations of people now emerging from communism. The degree of their ability to overcome this attitude will determine whether (or how quick) they will become citizens of the free world.

At present, the people in the East are feeling lost. Nobody seems to inform them about a few basic and simple facts, such as:

A penny somebody gets without having earned it, is a penny somebody else earned but did not get.

The Work-Hypothesis of Value in its socialist interpretation is false and wrong: Value depends on Supply and Demand, and not on the "frozen work" attached to an item.

The Right to Work in its socialist interpretation is wrong; in the long run it is a deadly weapon to suppress the worker.

The Marxist slogan that "property is theft" is a convenient weapon for a dictatorship.

There is no class-less society. Instead, the goal must be to make the borders between classes as translucent and penetrable as possible.

Wars between authoritarian states, and wars between such states and democracies abound in history but there are no wars between democracies; democracies may suffer occasionally from internal wars.

When confronted with these statements, there will be strong attempts to discredit their validity. Therefore, such statements are excellent openers for discussions. Of course, many other facts of democracy may also serve that purpose.

The situation in the former Warsaw Pact states may be illustrated by the following example, surprising from the Western point of view: we may meet there the conviction that having acquired a Ph.D. legally entitles you to an adequate position; and if you don't, that you can go to court and sue the state for it. This may explain the fact that scientists in the five new länder who lost their jobs after reunification were complaining to the German Supreme Court in Karlsruhe (West-Germany). As they see it, maybe half subconsciously, they have been employees of the state during all their adult lives, even as students at a university, earning their living by doing what the employer required of them, e.g., learning. They have done that well, can prove it, and continue to remain employees of the same employer. If they do not do anything terribly wrong, the employer cannot fire them. The cruel fact that their skills are no longer needed, will not be acknowledged by them, because they are convinced - and probably correctly so - that their skills can contribute to the benefit of mankind. In their minds, there may be the further fact that mankind - possibly to its own disadvantage - does not sufficiently recognize that potential benefit, but unfortunately cannot be told anymore that it must do so. It takes a while before the true facts are discovered and accepted.

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Remark on the

### PAGINATION

used in this Report A:

This Report consists of 8 "Main Chapters". Most of them have several "Chapters" and many of the chapters have one or more classes of further subdivision. Cross-References always refer to these chapters etc.

There are, however, no through-going page numbers in this report, and the Table of Contents does not contain page numbers either.

Instead, we find in the upper right corner of each page a number which begins with G804L3.. or G804L4... Disconsider these first six digits of the number<sup>1</sup>.

What follows after these first six digits indicates the Main Chapters and the Chapters, in the following form:

a-bb-cc

in which a is the number of the Main Chapter, bb is the number of the Chapter (within that Main Chapter), and cc is the number of the page within that Chapter.

The date given under this number refers to the day when the last change on that page has been made.

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<sup>1</sup>) This system was used because the report was written in a parallel fashion: many chapters were begun und finished at the same time. The system was maintained to make future additions possible without changing the whole page counting every time. The first six digits refer to the labels of the diskettes used for the various drafts of the report.